NOV 8 1926

PAPER TRADE JOURNAL

Reg. U. S. Pat. Off.

Vol. LXXXIII, No. 19 NOVEMBER 4, 1926 Per annum, $4.00 Per copy, 10 cents

NOV 8 1926

"Walmsley Machines Excel"

Manufacturers of

News-print Paper Machines
Board-paper Machines
Board Machines
Wood Grinders, Roll Grinders
Hydro Turbine Vacuum Pumps, Etc., Etc.

Charles Walmsley & Co.
(CANADA) LIMITED

Office:
511 St. Catherine Street,
MONTREAL, QUE.

Works:
LONGUEUIL,
QUEBEC

STRENGTH and SECURITY

WAYAGAMACK

KRAFT PULP

UNIFORM IN QUALITY—ESSENTIAL FOR STRENGTH

THE PULP and PAPER TRADING COMPANY

21 East 40th St., NEW YORK, N. Y.

Sole Sales Agents for United States for

CANADIAN KRAFT, Ltd. THREE RIVERS, CANADA

For Quality Papers Use

A-1 BLEACHED SULPHITE PULP

Mills at Borregaard, Norway

E-B BLEACHED SULPHITE PULP

Mills at Edsvalla, Sweden

VESTFOS EASY BLEACHING SULPHITE

Mills at Vestfossen, Norway

KRONSTÄDTER STRONG UNBLEACHED AND EASY BLEACHING SULPHITE

Mills at Turciansky Sv. Martin, Czecho-Slovakia

NENSJÖ NENSJÖ KRAFT **KRAFT PULP**

Mills at Sprangsviken, Sweden

J. ANDERSEN & CO.

21 East 40th Street NEW YORK, N. Y.

Sole Sales Agents for the U. S. A.

Entered as second class matter August 13, 1925, at the Post Office at East Stroudsburg, Pa., under Act of Congress of March 3, 1879. ESTABLISHED 1872 FIFTY-FIFTH YEAR Published every Thursday by the Lockwood Trade Journal Co., at 34 N. Crystal St., E. Stroudsburg, Pa
EXECUTIVE AND EDITORIAL OFFICES: 10 EAST 39th STREET, NEW YORK CITY CHICAGO: 123 West Madison St., Chicago, Ill

NATIONAL ACID ORANGES

FOR beater dyeing or calender staining, the following National Dyes should be used for all shades of orange:

National Acid Orange YP

National Acid Orange RP

National Croceine Orange Y Conc.

Their high purity and low price also make them incomparable in the manufacture of pulp colors for coating and printing.

National Aniline & Chemical Co., Inc.
40 Rector St., New York, N.Y.

BOSTON PHILADELPHIA SAN FRANCISCO
PROVIDENCE CHICAGO MONTREAL
HARTFORD CHARLOTTE TORONTO

NATIONAL DYES

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-FIFTH YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., Inc.

LESLIE H. PALMER, President — GEO. S. MACDONALD, Vice-President & Treas. — F. L. HOPPIE, Secretary

Executive and Editorial Offices: 10 East 39th Street, New York
Chicago Office: Room 14, Suite 410, 123 West Madison St.

TABLE OF CONTENTS

Copyright, 1926, by Lockwood Trade Journal Co., Inc.

Dinner to Col. Serlachius and Norman Wilson	19
Rapid Progress on Power Project at Green Bay	21
Rushing Work on Kotex Building	21
Menasha Paper Mills Make Repairs	21
LaSalle Paper Co. Plant Sold	21
Paper Demand Expands in Philadelphia	22
Paterson Parchment Paper Co. Exhibits	22
Japan Paper Co. Shows New Imports	22
Shows New Reading Mill Line	22
Pennsylvania Salt Mfg. Co. Reorganizes	23
C. W. Williams Co. Offers New Papers	23
P. H. Glatfelter Co. Builds Addition	23
Container Corp. in New Quarters	23
Powell River Co. Completes New Units	24
Terre Bone Pulp Mill Project	24
High Water Damage in New Brunswick	24
Los Angeles Paper Demand Shows Continued Growth	26
Pioneer Paper Co. Improvements	26
Charles W. Walker to Go to Three Rivers	26
Paper Demand in Toronto Continues Fair	28
Progress in Mattagami Case Halted	28
Pulp Wood Cutters Strike Ending	28
Construction News	30
New York Trade Jottings	32
Editorial	**34**
Canadian Paper Exports Increase	35
Sunday Work in Paper Mills	35
Forestry Committee to Ask for $1,000,000	35
Index Number for Paper Lower	35
Technical Section	
Marathon to Make Swamp Drainage Experiment	37
Use of Glue in Coated Paper	42
Current Paper Trade Literature	45
Cost Section	**47**
Trade Paper Customs for Gummed Tape	50
An attractive Service Department Office	52
Imports of Paper and Paper Stock	54
New York Market Review	**58**
Miscellaneous Markets	**60**
Market Quotations	**62**

Want and For Sale Advertisements, 74, 75, 76, 77

HOW MCNAMEE CLAY IS PRODUCED

WHY SHIPMENTS ARE PROMPT

The Mine

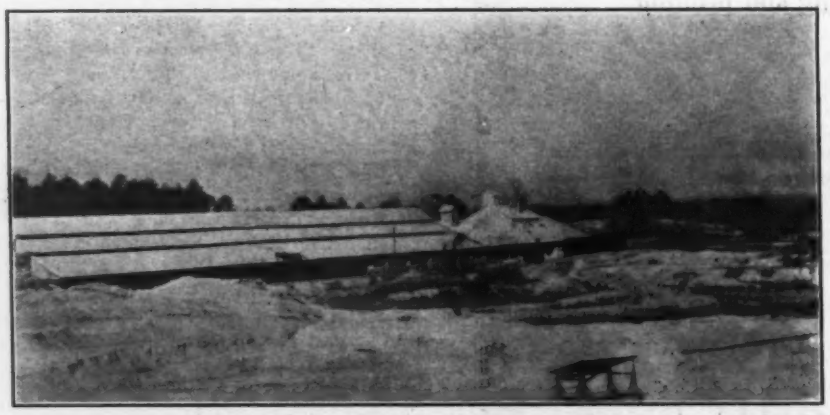
Why tonnage is reliable

The day this picture was taken 250 tons were mined

Completely equipped with mine locomotives and trains. We plan to keep dirt stripped back for at least one year ahead. At one of these mines we have five years of clay uncovered. Most of our labor lives in houses on our property.

The Plant

Why quality and service are secure

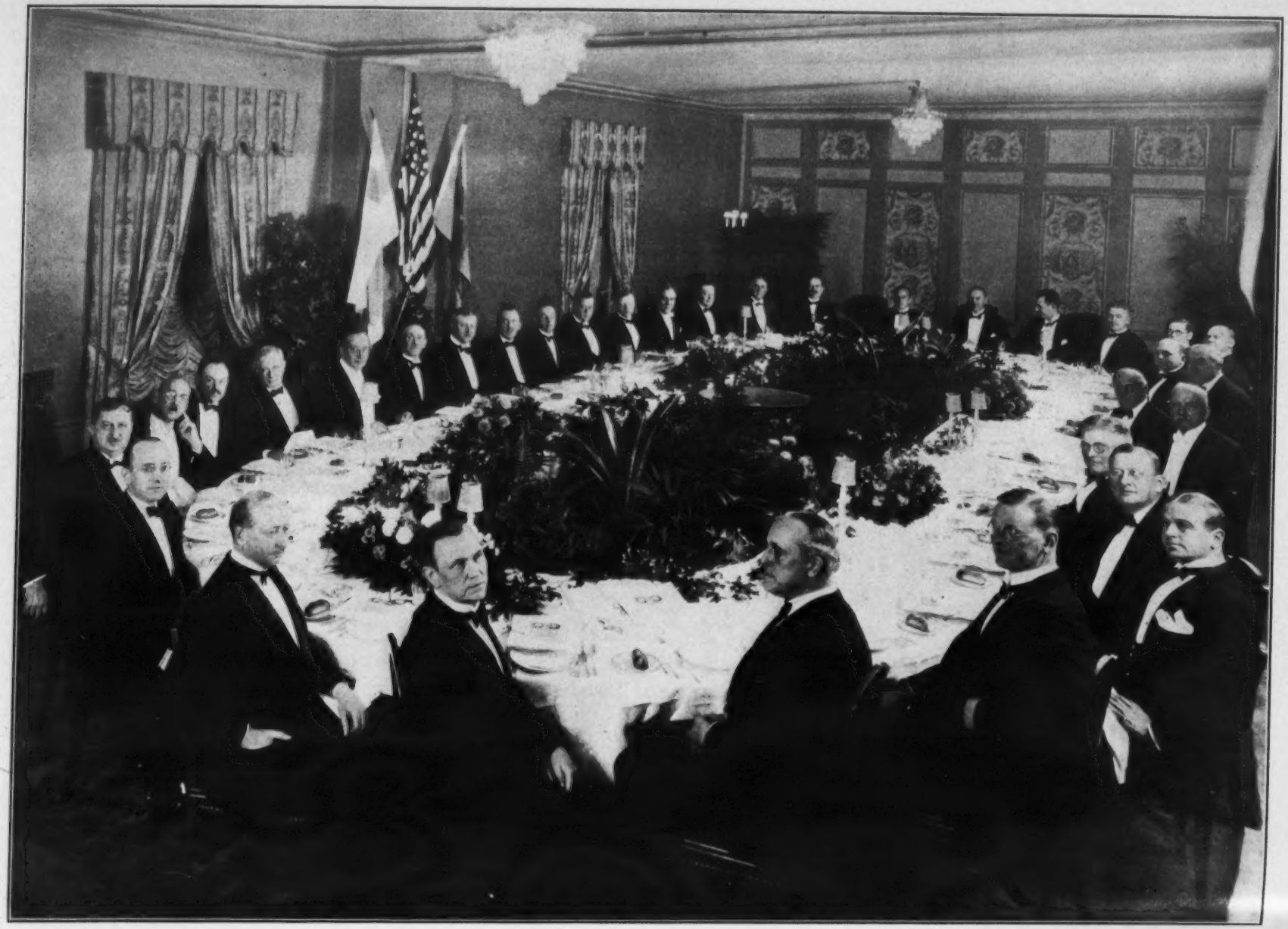


We have loaded and shipped 15 cars in a day

Storage for 6,000 tons, lump clay and pulverized.
Equipped with dryers to reduce moisture below 1% if necessary.
Including a complete pulverizing and packing plant.

TEN DAY CLAY—Our Traffic Department will undertake to get clay delivered to you ten days after we receive your order.

R. T. VANDERBILT CO.,
50 East 42nd St., New York



PICTURE TAKEN AT COMPLIMENTARY BANQUET TO COL. GÖSTA SERLACHIUS OF FINLAND AND NORMAN W. WILSON, PRESIDENT OF THE AMERICAN PAPER AND PULP ASSOCIATION, BY DR. JAMES E. CAMPBELL OF THE DEXTER SULPHITE PULP & PAPER CO. AT SHERRY'S, NEW YORK, WEDNESDAY EVENING, NOVEMBER 3, 1920.

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

Vol. LXXXIII, No. 19 Thursday, November 4, 1926

The Magazine of the Paper Industry

Dr. James E. Campbell of the Dexter Sulphite Pulp & Paper Co. at Sherry's, New York, Wednesday Evening, November 3, 1926.

American Paper Men Dine With Col. Serlachius

Complimentary Banquet Tendered to Distinguished Finnish Visitor and Norman Wilson, President of the American Paper and Pulp Association, by Dr. James E. Campbell, of the Dexter Sulphite Pulp and Paper Co., Brings Together Noteworthy Group of Men In the Paper Industry at Sherry's In New York

As thirty-eight of the leading paper manufacturers of the United States, with a group of notable foreign guests, sat at a round table at dinner at Sherry's in New York City on the evening of November 3, it was easy to appreciate the significance of the getting together of men today in world affairs as yesterday we got together in national or local affairs. Seldom if ever has a group of more important representatives of the paper industry in the United States been brought together with the most prominent manufacturers in the same industry in a foreign country than came together as the guests of Dr. James E. Campbell of the Dexter Sulphite Pulp and Paper Company on Wednesday night.

The dinner began with an informal reception at which men from different papermaking sections of the United States met Col. Gösta Serlachius, Judge Jacob von Julin, the president of the Finnish Cellulose Association, Minister Aström of Finland, and others. As the guests sat down at dinner they were greeted with an unusual menu card prepared by Tiffany's, on which was shown the pictures of Col. Serlachius and Mr. Wilson.

Dr. Campbell Tells About Scandinavian Visits

At the close of the dinner Dr. Campbell greeted the guests, telling of his first visits to Scandinavia in 1919 and 1920, and later visits, which emphasized to him the potential of Finland, as he described it. He referred to the forest wealth of Finland and to the fact that Finland's forests have been under careful management for more than 100 years. He urged broader understanding and friendlier cooperation between the United States and Finland.

In introducing Norman W. Wilson, President of the American Paper and Pulp Association, Dr. Campbell spoke of the growth of the Association and of the part which it must play in exchange of information and the bringing about of sounder business relationships between the two countries. Mr. Wilson referred to his trip to Scandinavia last year, expressing regret that the time did not allow his reaching Finland but that Finland would be included in his next trip. Mr. Wilson emphasized the necessity for broader basis of commercial understanding between the pulp and paper industry of the United States and countries with which we do business in Europe.

Minister Astrom Speaks

Minister Aström of Finland, the next speaker, told in a very interesting way of the tremendous work done by leaders in Finland in bringing about Finnish independence and he referred very feelingly to the part which Col. Serlachius played in bringing about law and order in the new republic. He characterized the efforts of his countrymen as the application of the American spirit, which caused them to make possible the doing of impossible things. He described further the accomplishment of what appeared at the beginning as the impossible task in creating new markets for Finnish products when previous to the war most of the Finnish products had gone eastward to Russia.

Mr. Sisson Speaks of International Relations

In introducing the next speaker, George W. Sisson, Jr., Dr. Campbell spoke of the service which Mr. Sisson had given so freely in the upbuilding of the American Paper and Pulp Association and through this the bringing about of greater cooperation in the industry. Mr. Sisson spoke very feelingly of the occasion of representatives of the two countries sitting down together for friendly, cooperative spirit, and emphasized the common problems of the world pulp and paper industry.

K. F. Altio, Consul General of Finland in New York, followed Mr. Sisson, bringing out the effort which Finland was making to send her most representative business men to bring about better feeling and better trade in this country and in other countries. He referred to the cordial welcome which American manufacturers would always find in Finland.

Arthur Hastings Tells of Paper Changes

Arthur C. Hastings, a past president of American Paper and Pulp Association, was called upon by Dr. Campbell, who referred to him as the veteran manufacturer present, who had seen great changes in the paper industry in the past 40 years. Mr. Hastings spoke in a very happy vein of his presence at the dinner and of his retirement to a home on Cape Cod, suggesting that he had found that scallops and clams, and possibly other denizens of the deep which come in at night, found a welcome at his door and he assured manufacturers that they would find an equal welcome with the clams and scallops, etc.

In introducing Olaf H. Lamm, Consul General of Sweden, Dr. Campbell referred to Sweden as being his first love and expressed the same cordial feeling as to better and broader understanding between the Swedish manufacturers which he had emphasized in welcoming the principal guests from Finland. Consul General Lamm spoke briefly of the interest of his country in improving international relations and the development of markets along sound economic lines.

Col. Serlachius Speaks

In introducing the last speaker of the evening, Col. Serlachius, Dr. Campbell referred very feelingly to the cordial way in which Col. Serlachius had greeted him in Finland and to the part which

he had played in putting Finland onto a sound foundation of law and order and an effective business basis. Col. Serlachius referred in his opening remarks to the help which America had given Finland and the appreciation of his people of the cordial, friendly spirit shown by this great republic for a struggling new country which is only about three times the size of the State of New York, with a population less than half of greater New York City. He spoke of the great forest wealth of the country and the need of help in developing this wealth. In closing he extended cordial welcome to American manufacturers to visit the Finnish mills and to become better acquainted with his country.

The List of Guests

Col. Gösta Serlachius. Chairman and Managing Director C. A. Serlachius, Limited.

Norman W. Wilson. President, American Paper and Pulp Association.

Honorable L. Aström. Minister of the Republic of Finland to the United States.

K. F. Altio. Consul General of Finland.

Frank A. Augsbury. President, Algonquin Paper Corporation.

Ingenior Harry Alfthen. G. A. Serlachius, Limited.

Dr. Hugh P. Baker. Executive Secretary, American Paper and Pulp Association.

Ernst R. Behrend. President, Hammermill Paper Company.

Dr. C. W. Campbell. Vice-President, Dexter Sulphite Pulp and Paper Company.

Dr. James E. Campbell. President, Dexter Sulphite Pulp and Paper Company.

Floyd L. Carlisle. President, St. Regis Paper Company.

Hugh J. Chisholm. President, Oxford Paper Company.

C. A. Crocker. President, Crocker-McElwain Company.

Donald Durant. Lee, Higginson & Co.

Herman Elsas. President, Continental Paper and Bag Mills Corporation.

P. H. Glatfelter. Treasurer, P. H. Glatfelter Company.

A. R. Graustein. President, International Paper Company.

John M. Gylphe. Director, A. Ahlstrom-Osakeyhtio.

Arthur C. Hastings. General Manager, Cliff Paper Company.

J. P. Hummel. President, Hummel-Ross Fibre Corporation.

Orvar Hylin. Vice-President, Lagerloef Trading Company.

Jacob von Julin. President, Finnish Cellulose Association.

I. Kuhe, Vice-President, Continental Paper and Bag Mills Corporation.

Olaf H. Lamm. Consul General of Sweden.

Hans Lagerloef. President, Lagerloef Trading Company.

David L. Luke. President, West Virginia Pulp and Paper Company.

H. Edmund Machold. Vice-President, St. Regis Paper Company.

Jay. Madden. Vice-President, Parsons & Whittemore.

Milton E. Marcuse. President, Bedford Pulp and Paper Company.

C. R. McMillen. Vice-President, Union Bag and Paper Corporation.

Rudolph Pagenstecher. President, Central Paper Company.

F. Charles Schwedtman. Vice-President, National City Bank.

Frank J. Sensenbrenner. Vice-President, Kimberly-Clark Company.

Erich Serlachius. G. A. Serlachius, Limited.

George W. Sisson, Jr. President, Racquette River Paper Company.

Frank L. Stevens. President, Stevens and Thompson Paper Company.

Henry W. Stokes. President, York Haven Paper Company.

S. L. Willson. President, American Writing Paper Company.

Education Committee To Increase Interest

To enable him to visit a wider range of mills and discuss with executives appropriate systems of training or study, the Joint Committee on Vocational Education of the Pulp and Paper Industry has placed at the disposal of T. L. Crossley a limited portion of its funds.

Mr. Crossley has been for some years devoting much of his time to this work as Director of Extension Service for the Institute of Industrial Arts, of whose faculty he is a member, but as this is not essentially a profit earning enterprise, his field has been limited to mills wherein a sufficient number of students was assured to warrant the overhead expense.

The committee feels that it is desirable to make Mr. Crossley's services available in a broader field to advise with management and men in the matter of training systems and individual study, either with the Wisconsin University Extension courses, the Institute of Industrial Arts, or other schools for cases requiring special instruction.

Of the 140,000 employees in the pulp and paper industry in the United States and Canada, it appears that less than 2,000 are studying definitely to make pulp and paper a life work. In view of the rapid progress in mechanical equipment it is imperative that steps be taken to bring a larger number of present operatives into line with this progress, and to prepare a future supply of employees having a good grounding in basic scientific principles coupled with sound practical experience.

The Joint Committee believes that this is a matter for serious consideration by the directorship of the industry.

It should be arranged, if possible, to have Mr. Crossley meet the directors in cases where company policy requires their consideration. This will save time and ensure more active support for the mill personnel.

Those who are not acquainted with Mr. Crossley may be interested to know that he has been connected with the paper industry for twenty-five years, both in the mills and in consulting work. He is president of the Industrial Laboratories of Toronto, is a member of the Joint Committee on Vocational Education, has been since its inception chairman of the Committee on Education of the Technical Section of the Canadian Pulp and Paper Association, and has recently been appointed special lecturer in pulp and paper at the University of Toronto.

Mr. Crossley may be communicated with either through the office of the Joint Committee on Vocational Education, R. S. Kellogg, secretary, 342 Madison avenue, New York, or at the Industrial Laboratories, Limited, Richmond and Sheppard streets, Toronto, Ont.

I. P. $25,000,000 Bonds Go Quickly

The long expected issue of $25,000,000 International Paper Company 6 per cent. convertible debenture bonds appeared in a public offering last week and was oversubscribed. The bonds, maturing in 1941 were offered at 98 by a syndicate composed of the Chase Securities Corporation, the Bankers Trust Company, Harris, Forbes & Co., the Union Trust Company of Pittsburgh, the Continental & Commercial Company, Halsey, Stuart & Co., Inc., and Redmond & Co.

These debentures are convertible into preferred stock of the company after April 1, 1927, at the rate of ten shares for each $1,000 principal amount. Conversions on or before October 1, 1928, will carry a privilege to the bond holder of subscribing to one share of common stock at $50 for each debenture converted.

The book value of the company's capital assets and those of wholly owned subsidiaries is in excess of $125,000,000. The equity behind the funded debt now to be outstanding will be represented by common and preferred stock with a current market value of more than $55,000,000.

Rapid Progress on Power Project at Green Bay

Dams, Plants and Lines Will, It Is Expected, Be Completed on Scheduled Time May 1, 1927—Practically All of the Machinery and Equipment Have Been Purchased According to President Judson G. Rosebush—Kotex Plant Nears Completion

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 1, 1926.—With five large crews at work, the new power project of the Northern Electric Company, subsidiary of the Northern Paper Mills, Green Bay, Wis., is taking shape rapidly. It is believed that the dams, plants and lines will be completed by the scheduled time, May 1, 1927.

At Chalk Hills, on the Menominee river near Amberg, Wis., 137 men are excavating rock for the power house at that site. These men are building a 1,400-foot embankment. A crew engaged in similar work at the site of the twin dam and power house of this company at White Rapids, numbers 169 men. Excavation for both power houses is completed and pouring of concrete for the foundations is to be started next week. River bed conditions were found excellent and both plants will rest directly on granite rock.

Another of the construction crews is building the power lines on towers previously erected, so as to bring the power from the Menominee river to the Northern company mills at Green Bay. This work will be finished by the first of the year. One more group of men is erecting towers between Amberg and the plant, and a fifth is making improvements on Miscauno island, which will be nearly in the center of one of the artificial lakes which will result from damming of the stream.

Practicaluly all of the machinery and equipment have been purchased, according to a statement of Judson G. Rosebush, president of the paper company and the power subsidiary. Turbines and generators from the Allis-Chalmers plant, Milwaukee, will be installed at Chalk Hills. At White Rapids, turbines from S. Morgan Smith will be direct-connected to General Electric generators. There will be three vertical units in each power plant, developing in the aggregate approximately 22,600 horsepower, about evenly divided between the two plants.

Ten ton caterpillar tractors are being used to haul the machinery and equipment from the Wisconsin & Michigan railroad station at Kells, Mich. Arrival of snow will not stop operations, because sleighs will be put into use.

All stumps, logs, deadheads and other obstructions are being cleared from the area that will form the bottom of two lakes which will result from the damming of the stream. One lake will be approximately two and a half miles in each direction, and the other seven miles long and about two miles wide. Summer resort possibilities are not being overlooked, because there are beautiful shore lines, and the lakes are to be stocked with fish. The Four Seasons club will have its headquarters at Miscauno Island.

Rushing Work on Kotex Building

Cold weather cannot now interfere with construction of the new five story factory unit for the Kotex Company, Neenah, Wis., subsidiary of the Kimberly-Clark Company. The walls of the structure are all completed, and windows are being put in. The building thus will be enclosed in a short time so the interior can be completed and machinery installed. The growing business in Cellucotton products makes the building in urgent demand and workmen are putting in long hours to rush it through.

Menasha Paper Mills Make Repairs

Repair work has been started at the plant of the Menasha Paper Mills Company, Menasha, Wis., newly organized corporation which purchased the defunct Island Paper Company. A small crew of men has been placed at work and a larger number will be added when the extensive alterations now in contemplation are to be started. The equipment will be changed for the manufacture of straw board, the principal product of the new concern.

Fox River Paper Co. Sand Blasts Mill

Rather than disturb the beauty produced by ivy vines growing extensively on mill No. 1 of the Fox River Paper Company, Appleton, Wis., sandblasting of the brick was deferred until this week and the work now is under way. All other buildings were cleaned of their grimy appearance last summer as part of a beautifying program, and the present task will complete the project. The vines will be unharmed by the workers.

Banquet for Champion Baseball Team

Employees of the Central Paper Company, Menasha, Wis., captured the trophy cup awarded each year to the championship team of the Menasha Industrial Baseball League. A banquet was held as the windup event of the season at which the champions were honored. The cup was presented by Mayor N. G. Remmel and accepted by William Gerbrick, president of the Central Paper Company, for the team.

Marksmanship Honors for F. J. Schneller

Marksmanship honors of national scope have come to Frank J. Schneller, vice president and sales manager of the Gilbert Paper Company, Menasha, Wis. On top of being a member of the championship team which won the Wisconsin state American Legion marksmanship trophy at LaGrosse, Wis., in August, Mr. Schneller now holds honors with four other Wisconsin Legionnaires who won first place in the national American Legion rifle and pistol championship contest at Philadelphia, Pa. The contest was held in connection with the national Legion convention and the winners brought fame to their state by their work. The average score of Mr. Schneller was among the highest.

La Salle Paper Co. Plants Sold

INDIANAPOLIS, Ind., November 1, 1926.—The South Bend and Mishawaka, Ind., plants of the bankrupt LaSalle Paper Company, have been sold on court order to Henry B. Battles of Chicago, for approximately $235,000. The deed was approved by Judge Thomas W. Slick of the South Bend division of the United States district court, sitting in Hammond, and was ordered delivered to Mr. Battles.

The property was bought subject to bonded indebtedness of $225,000 with interest, and the price paid included that sum, the interest on the debts and an additional $500.

It is understood the property was bought to protect the bondholders, as attorneys state it would not bring much more than $150,000 if placed on the open market. It is not known in Indiana what connection Mr. Battles has with the bondholders, but it is believed he is interested. Two large Chicago banking firms floated the bond issues.

The property bought includes real estate, equipment, machinery and other assets of the defunct company.

Bankruptcy proceedings were brought against the company September 16 by three South Bend firms, the Campbell Paper Box Company, the Brehmer Electric Company and the N. P. Bowsher Company, whose petition alleged that the company had committed, while insolvent, an act of bankruptcy by transferring a portion of its property to certain creditors, showing preference.

Claude E. Nicely is president of the paper company.

Paper Demand Expands In Philadelphia

Market Is in Healthful Condition With No Disturbances in Sight For the Remainder of the Year—Mills Enjoy Fairly Well Maintained Volume of Business With Production Near 80 Per Cent of Capacity

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa. November 1, 1926.— From all indications the local market is in a healthy state of business and with no outlook for disturbances for the remainder of the year. There is brisk ordering for the holiday needs. Mills apparently are enjoying a fairly well maintained volume of business with present production near 80 per cent of capacity, and with little stock on hand. Production in the Pennsylvania Mills, as in most of the manufacturing centers of the country is being held down to the needs of the immediate future. There is no manufacturing for the future on an extensive scale so that the industry is not anticipating any disturbances from overproduction and price reductions.

Fine Papers Holding Firmly

While the recent reduced values of fine papers has aided materially in the popularity of certain grades of these commodities made in the local mills or in those of the State of Pennsylvania, there is a fair amount of the products from other sections of the country moving from the warehouses at this time. Orders while not showing preparation for the future are considerable when bulked in the total amounts of the month's business showing that there has been a growing demand with the fall activities.

News Print Becomes Very Active

Orders for news print expand and show a record consumption for the year. It is believed that the tremendous amount of advertising which is being done in the daily press, through direct mail contact and announcement of new fall stocks, all have aided in the spread of distribution of the news print stocks. Printers and newspaper publishers are equally generous in the placing of demands for these grades of paper. Prices have in consequence shown an advance of ¼ cent within the past few days.

Specialty Papers Hold in Broad Market

Grey bogus has been active and with its growing distribution the prices have been advanced 15 cents per 100 pounds. Tissues are active with consumption chiefly in the department stores. Building papers are sought in larger volume with the fall construction program but have not yet been subjected to any price revisions as a result of the activity although indications are that an upward quotation is in prospect.

Krafts Gaining in Popularity

Quaker City coarse paper dealers or those handling krafts along with specialties are much gratified with the growing popularity of these wrappings. Local dealers state that the tendency of the consumer towards krafts for many uses has placed this grade of coarse paper at the head of the list in the market and with the largest volume of distribution enjoyed at this time. While krafts show a tendency to supercede all other papers the sulphite grades are waning. Local dealers have been informed than many mills heretofore producing sulphites now are turning their production to cheaper grades of writing. With the approaching holidays there is growth of orders for the fancy holly designs in wrappings and glassines designed for the Christmas trade.

Twines Continue To Fall

As the cotton conditions in the South continues to disturb the financial and agricultural interests of that section the prices of cotton twines follow the downward values of the raw material market. With a drop to 13 cents from 17½ cents per pound in the prices of cotton within a period of 60 days the values of the finished twines have been proportionately reduced. The report of the bumper crop of jute in India, too, has taken its toll in the cut into values on the finished jute specialties traded by the paper dealers and including twines, cords, bagging and like wares. The drop has been from 30 to 40 per cent within the past month. It is not anticipated that values will be further lowered as the bankers have decided with the past few days to finance the cotton market for the next 18 month or two years should it be required in order to steady the market and save serious loss to the growers and packers in the South and have arranged for a 25 per cent decrease in the planting of crops during the next year. This is likely to steady the cord and twine markets so that present stocks may be salvaged without serious loss to the dealers handling these specialties in any volume.

Paterson Parchment Paper Co. Exhibits

Having successfully exploited its lines of art papers and other parchment requirements of the standard grades the Paterson Parchment Paper Company now is featuring a specialized exhibition of the industrial parchments at the Sesqui Centennial International Exposition. The Paterson Parchment Paper Company, is one of the few paper concerns now at the Exposition and has been among the attractive places in the Palace of Agriculture and Food Products. During the present month there will be on exhibition the complete assortment of industrial parchments used for the packing and preservation of food products, with Mrs. Marian Berry, of the Passaic Mills in charge and conducting an informative and educational campaign for the public who daily throng the exhibit. Under the direction of Mrs. Berry, the public are shown the varied uses for the Paterson Parchments in the home for wrapping of food products, for cooking and for the preservation of these. The wrapping of meats, diary products, ice cream and like foods are demonstrated in the exhibits while the possibilities of conservation of the juices in the foods while cooking through wrapping with waterproof parchments also is shown, and has added materially to the public's knowledge of the uses to which these parchments may be put. An educational booklet termed "Vegetable Parchment Comes Into the Kitchen," is being distributed. It shows uses of the parchments in the home and receipts for cooking in conjunction with these.

Art Parchments for greeting card and announcements and for diplomas, are also on exhibition with samples in booklet form handed to the visitors among the sight seeing throngs at the Exposition.

Japan Paper Co. Shows New Imports

Special holiday wrappings of unique designs for the Christmas gift giving season have been imported from the French markets by the Japan Paper Company and now are being distributed to the Philadelphia dealers. Other recently imported papers that are ready for the fall and now being shown the trade through the Quaker City offices in the Witherspoon Building, by Manager C. Warwick Miller, are those of lamp shade Batiks and Borneo papers for the home or general manufacturing of lamp shades of the present fashionable types. It is expected that entirely new ideas of imported papers from the European mills will be shown in this country upon the return from Europe of President Thomas N. Fairbanks of the company, now engaged in touring the mills across the seas.

Shows New Reading Mill Line

There just has been received by the Paper House of Pennsylvania, 28 N. 6th street. an entirely new line of color. papers in the Louvain Book manufactured by the Reading Paper Mills, of Reading, Pa., and distributed locally by the Paper House, exclusively. The new shades of the Louvain Book papers are Bluebeard (Medium Blue), Peter Pan (Light Green), Aladdin (Sal-

mon), Sweetmeat (Light Tan), and all in wove and laid effects. The entire new assortment is produced in 25 x 38-70, only. Samplers of the new shades are being distributed by the local dealers.

Saturday Evening Post Features Strathmore Papers

An announcement is being sent to the Quaker City trade of the campaign which is being conducted by the Strathmore Paper Company in the Saturday Evening Post, published here, by the Curtis Publishing Company. The second of the Strathmore ads appeared in the issue of October 9 and featured the printer's position in the scheme of direct advertising copy preparation. This national advertising by the mills is being worked in conjunction with the copy of "The Secrets of Attention Getting" put out in booklet form, and being distributed through the local dealers the Thomas F. Price Company, The Paper House of Pennsylvania, Raymond and McNutt, A. Hartung, Inc., and the Charles Beck Paper Company.

Edward Wesson With American Writing

Following several years experiences with the mill end of the business of the American Writing Paper Company, Edward Wesson is now associated with the Philadelphia branch under management of Fred Hastings, and with offices in the Bourse. Previous to joining the Colors in the Great War, he was connected with the sales organization at the mills, and within recent years rejoined the staff. He will act as assistant to Manager Hastings.

Bastrop Krafts

There is being sold through the Philadelphia dealers a large amount of Bastrop, La. Krafts manufactured in the mills in that section of the country. Among the dealers now distributing Bastrop Krafts are the Garrett-Buchanan Company, and the Mather Paper Company, both receiving heavy shipments by water from the Southern mills of the Gator Hide Krafts, made in the plant of the International Paper Company at Bastrop. The two firms are the Philadelphia representatives of the International Paper Company in this city having recently acquired the distribution of these products for this territory.

Learn of Death of Charles Garrett

Trade friends of the late Charles Garrett learned of his passing at the West Chester Hospital after a long illness. Mr. Garrett's death took place in mid October after a long confinement from complicated maladies at the West Chester, Pa. hospital where his home is located. He was for many years associated with his father Edwin T. Garrett, founder of the Upper Darby Mills where he learned the business of paper manufacturing. In recent years he had been connected with the Forest Mills, under the ownership of Elmer Garrett, leaving that mill upon the sale of the business and property to Herbert W. Mason. He was also a relative of Sylvester S. Garrett head of the firm bearing his name in this city.

Pennsylvania Salt Mfg. Co. Reorganizes

Following the annual meeting of the stockholders of the Pennsylvania Salt Manufacturing Company, held last Wednesday in the Widener Building there was a reorganization of the Board of Directors and officers.

Under the reorganization the following changes were made at the meeting in the company's general offices:—

George Fales Baker, M. D., has retired as president and has been elected chairman of the board.

Miers Busch, former vice president and acting as General Manager has been elected president.

William P. Morris, vice president and Treasurer of Morris, Wheeler and Company, Inc., Philadelphia, has been elected first vice president.

The former members of the board—John Scott, Leonard T. Beale, William P. Gest and Sydney Thayer were re-elected.

The above members of the official body and the executive board are all prominent in the business and public life of the City of Brotherly Love.

With the changes in the personnel there was action by the stockholders in the matter of changes in the bylaws. The bylaws have been entirely changed to include a new set of rules and regulations governing the company and its members. At meetings of the six subsidiaries of the company immediately following that of the parent company there was unanimous acceptance of the new bylaws which were adopted, thus securing uniformity in control.

The company is engaged in the manufacture of paper making chemicals and varied other lines of allied nature.

Charles W. Williams Co. Offers New Papers

An entirely new feature in the way of modish box papers has been added to the stocks of the Charles W. Williams Company, line now being offered through the Philadelphia offices in the Bourse Building. They are called the Valencia and have the Spanish colorfulness in the range of designs, all being of the vivid hues of the land from which the trade mark is taken. There will be offered during the coming month by the company a new line of Easter box makers papers adapted for the confectionery and caster novelty trade and other new ideas in these specialties for the year of 1927. Manager Elmer Renner of the local offices is now touring the South with the newest of designs. George Callahan is now assistant manager of the local territory and concentrates on the box trade in Philadelphia.

P. H. Glatfelter Co. Builds Addition

SPRING GROVE, Pa., November 1, 1926.—The last of the old mill buildings of the P. H. Glatfelter Company, erected in 1899, is to be remodeled into a modern daylight building. The new addition will be a one story building 120 feet by 167 feet, of brick and steel, with a car shed to accommodate three forty-foot box cars. The finishing department will be increased by 20,000 square feet of floor space, which will greatly facilitate the finishing of the product.

The new building will house the present 44- 54- 68- and 70-inch Holyoke Supercalender stacks, which are to be remodeled and modernly equipped with labor saving devices for handling the paper rolls. New equipment such as trimmers, cutters, sorting and finishing tables will be placed on the added floor space.

An order has just been placed with the E. P. Lawson Company, of New York City, for a large 94-inch Seybold Trimmer. This is said to be the largest type trimming machine in the East, at this time.

An electric crane will handle the paper to be calendered and for handling the heavy rolls of the supers. On a mezzanine floor at the north end of the building a large sample room 40 feet by 40 feet will be used for filing and testing of all paper manufactured.

The new addition necessitates the dismantling of the mill ice plant and drinking water cooling system, the work on which has already begun. The building when completed will be one of the best lighted, ventilated and equipped finishing and calender rooms to be found in any paper mill.

During the last seven years this company has made many extensive changes and improvements to their mill buildings and equipment. In the last year a modern steel building 60 feet wide by 200 feet long, having 300,000 cubic feet floor space, has been erected for the storage of pulp. A 4,500 KW., 66,000 volt substation has been erected for purchased power, which will be used in addition to the 3,000 KW. turbine now generated by their own steam plant.

Container Corp. in New Quarters

CHICAGO, November 1, 1926.—The Container Corporation of America, successor to the Paper Division of the Chicago Mill and Lumber Company, the Philadelphia Paper Manufacturing Company and the Cincinnati Corrugated Box Company, has removed its main office to larger quarters with increased facilities on the ninth floor of the Conway Building, 111 West Washington Street.

Powell River Co. Completes New Units

Output of Big Plant Is Now Approximately 900 Tons Daily—Pulp Mill May Be Built at Terrebonne—Increasing Interest Is Manifested in Britain in Canada's Paper Industry—Seek Protection Against American Magazines in Canada

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 1, 1926.—While big developments in the pulp and paper industry in Eastern Canada are taking place, it should not be overlooked that similar big developments, in proportionate degree, are taking place on the Pacific Coast.

For instance, the programme of expansion launched by the Powell River Company, at Powell River, B. C., eighty miles north of Vancouver, has now been completed, and the new units which have just been brought into production have increased the output of news print from 500 to approximately 900 tons daily. The enterprise represents a total capital cost of $20,000,000.

The Powell River Company is an American concern, with offices both in Minneapolis and Vancouver. The president is D. F. Brooks and the vice-president M. J. Scanlon. Among the buildings recently erected at the Powell River plant are a new power house and a new sawmill. The paper-making machines cost a little more than $500,000 each. Installed and in operation, with the driving plant and housing complete, this part of the enterprise alone represents an investment of $2,750,000. Other new construction includes a sawmill at a cost of $1,200,000, additions to the boiler house to the amount of $900,000; hydraulic development, $675,000; generating plant, $325,000; grinder room, including screen room and water wheels, $720,000; sulphite and acid plant, $570,000; wharf and tramways, $300,000; machine shop, $30,000; miscellaneous mill improvements, $80,000, and townsite, $500,000.

At the inaugural ceremonies, which were attended by Lieut.-Governor Bruce, Hon. T. A. Patullo, (Minister of Lands), and many others prominent in the public and business life of British Columbia, Mr. Scanlon said:

"The paper which we produce, I am proud to say is the finest news print paper in the world, for which I give credit to the local management and employees. We have a wonderful organization here, and I am proud of it.

"The Powell River Company is a Dominion institution. The province is a partner in this undertaking. Bankers hesitate to loan money to a company when the title to the land does not go with the product of the land, but I think it is a good thing. The Powell River Company could not afford to buy all the land from which it cuts timber. The province steps in and says: 'Here is the timber. Carry on.' The Powell River Company never had a better partner than the Province of British Columbia. We have never asked for or been given any favors, and the arrangement under which we operate has worked out with success to both."

Big Profits Anticipated from Canada

Sir George A. Sutton, chairman of the Amalgamated Press (the Rothermere papers), at the annual meeting of that organization in London, made the following reference to the company's investment in pulp and paper enterprises in Canada:

"Owing to the company's large paper requirements your directors keep in close touch with the paper-making industry. Leading authorities in this industry view with concern the depletion of the world's pulpwood reserves brought about by the present huge demands for news print and the large increase in the production of artificial silk. On this account a paper making undertaking that owns large timber limits from which to draw its pulpwood seemed to your directors to offer a promising field for investment.

"We, therefore, subscribed for 10,000 7 per cent preference shares of $100 each in the Anglo-Canadian Pulp and Paper Mills, a new company formed with Lord Rothermere as its president. Ten dollars per share have been paid up and the balance of $90 per share is payable by installments during 1927. The company has ample funds to provide for these payments. In consideration of subscribing for these preference shares we shall receive a bonus of 4,000 ordinary shares.

"The Anglo-Canadian Pulp and Paper Company has acquired vast timber limits on the north shore of the St. Lawrence River. These limits cover an area of approximately 2,237 square miles, and the quantity of pulpwood on them is estimated to be sufficient to produce 5,000,000 tons of paper, which is equivalent to 45 years' production of the proposed papermill.

"The preference shares will give a satisfactory yield and the holding of the ordinary shares will ensure that we participate in the prosperity of the new company."

Terrebonne Pulp Mill Project

The Quebec Electric Power Commission has received an application for permission to harness the Riviere des Milles Isles, the river almost parallel with the Ottawa River, north of Montreal. Should the permit be granted a pulp mill will be established at Terrebonne. In order to provide the necessary flow of water the channel would have to be bridged, or four controlling dams erected at the four outlets of the Lake of Two Mountains. These dams would be constructed at Laprairie River, Thousand Islands River, and the two outlets north and south of Ile Perrot into Lake St. Louis. Already permission has been granted for the development on Laprairie River, and the controlling means will have to be so constructed that these prior rights are not interfered with. Should the Thousand Islands River project mature, it will mean the development of about 16,000 horse power, and the expenditure of several million dollars.

High Water Damage in New Brunswick

A despatch from Fredericton, N. B., says that the Fraser Company's lumber mill at Fredericton Junction has been forced to suspend operations as a result of high water in the Oromocto river, following the recent rains. The rainfall caused a rise of twelve feet in the water of the Oromocto River, precipitating spring flood conditions, which have created a big jam near Fraser's Mill.

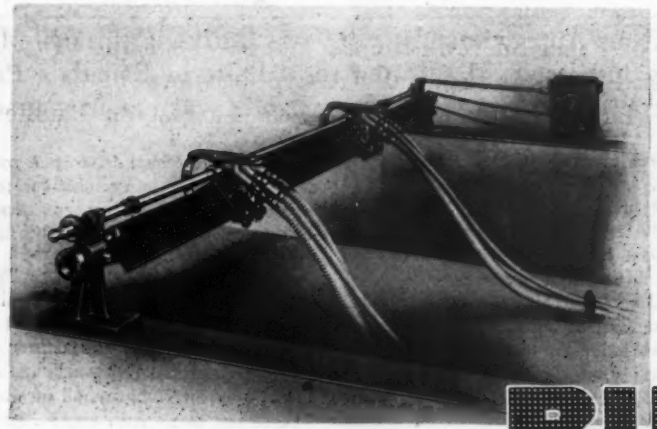
The bridge division, provincial Department of Public Works, has received a report of the carrying out of the Midland bridge, parish of Chipman, Queen's county. The rain of Monday also made it necessary for a bridge at Bathurst, which was being used while the other was out of commission, because of a previous storm, to be closed for repairs.

Reports of damaged bridges previously were of Gardiner's Creek bridge, St. John County, and Chapman bridge, Westmorland County.

Want Protection Against American Magazines

The Magazine Publishers Association of Canada has, during the past week been presenting evidence before the Advisory Board on Tariff and Taxation, in favor of protection against the competition of American magazines. The Board is unable to make any change in the tariff for this or any other purpose, but may make recommendations for action by the Government. The Canadian publishers claim that over 50,000,000 copies of American magazines are brought into Canada annually. These are free of duty, and besides constituting a serious competition for Canadian magazines to meet, the tremendous bulk of purely advertising material contained in the imported magazines is claimed to be detrimental to

(Continued on page 60)



BIRD MACHINERY

Let us prove that you need a Vickery Felt Conditioner

The savings that the Vickery Felt Conditioner effects are readily calculated.

We'd like to show you exactly how much these savings will amount to in your particular mill. And our estimates will be based not on what we think the Conditioner ought to do, but on what it actually is doing in mills like yours.

Will you let us do this?

BIRD MACHINE COMPANY
SOUTH WALPOLE — MASSACHUSETTS

Of 350 Vickery Felt Conditioners sold in the United States 223 represent repeat orders.

Over 800 Vickery Felt Conditioners are now operating in 25 different countries.

The Vickery Felt Conditioner

Los Angeles Demand Shows Continued Gain

Practically All Grades of Paper Share in the Expansion—Printing Trades Are Busy and Request for Cartons and Boxes Is Especially Active—Exports of Paper Products Show Big Gain—Pioneer Paper Co. Plant Now Largest on Pacific Coast

[FROM OUR REGULAR CORRESPONDENT]

LOS ANGELES, Cal., November 1, 1926.—The volume of trade in the paper industry shows a constant increase week after week and the factors in the trade here feel that there is a most prosperous season ahead of them. Comment has been made from time to time on the fact that there was no apparent slump in volume during the summer months. For some reason or other, no one seems able to say just what it was, the level of business has been maintained almost without serious variation for the last four or five months. Nor are any particular grades of paper to be distinguished by saying that they have been responsible for this gratifying situation since practically all grades appear to have been affected alike.

Naturally, at this time of the year, business is expected to pick up but whatever the pick up has been it has not shown as large a percentage of increase, measured on what has been doing during recent months, as was almost invariably the case in previous years. Of course, this anomaly is due to the fact that there has been an abnormal volume of general business in the paper trades done for some time back.

Printing Trades More Active

The printing trades have been getting under way for the fall and early winter rush in their departments and as a consequence the demand for paper from this direction has shown a decided increase in activity. Also the manufacturers of paper boxes are consuming large volumes of paper suitable for their needs and all appear to be very busy. The approach of the holiday demand is responsible for this activity.

The carton demand also is especially active. It always is during the raisin season and this year there is anticipated almost a record breaking crop of raisins so that many more cartons will be required than in some recent years. Also the demand for both fiber and corrugated shipping cases is keeping the manufacturers of both board and cases working full time to take care of it and promises to maintain its present state for some time to come.

Collections Show Improvement

Collections, which have been somewhat slow for several weeks, are improving with the return of better general business conditions and now are reported to be fairly satisfactory. Collections out here on the Pacific Coast are not as seasonal as they are in many sections of the country and appear to be affected one way or the other by considerations which appear to bear no relation to particular seasons. Inasmuch as in most industries in the far Southwest recuperative influences frequently manifest themselves when to all outward appearances they hardly can be expected, this fact makes the matter of collections one about which business men do not worry very much as in their experience they are likely to go from bad to better without notice.

Paper Products Exports Heavy

A report very recently issued dealing with the exports from the Los Angeles harbor reveals a heavy export of paper products. During the last fiscal year paper and paper products exported from Los Angeles aggregated a total of 32,612 tons, valued at $1,626,296. Conspicuous as contributing to this total is the enormous quantity of mulch paper exported to the Philippines and to Hawaii. This paper leaves the Pioneer Paper Company plant in Los Angeles in rolls. It is unrolled on the plantations where it is used and spread in strips on the ground. It is said to hold the ground moisture and also that the asphalt on it acts as a deterrent to insect damage. Great quantities of it are used on sugar cane and pineapple plantations. In addition to this mulch paper great quantities of composition roofing paper and shingles also are exported from Los Angeles harbor.

Pioneer Paper Co. Improvements

Following recent improvements in the mechanical equipment of the Pioneer Paper Company of Los Angeles this company now ranks as the largest manufacturer of roofing paper on the Pacific Coast. New machinery which totaled in cost $130,000 was installed recently by the company, all of which was purchased in the East. The largest single item was a 20,000-pound shingle machine. The Pioneer Paper Company estimates its investment in its Los Angeles plant now as aggregating $2,000,000 and its production has tripled within the last two years. It is said that the company is considering the installation of a branch factory somewhere in the west, but plans are too immature at present to be divulged.

General News of the Trade

The California Container Company has been incorporated at Los Angeles for $100,000. Incorporators are: Clarence B. Kerr, Martin C. Larsen, M. Sanford Rice and Albert E. Stein.

The Western Pacific Paper Company, 1530 Industrial street, reports a very satisfactory volume of business on practically all lines and grades. This confirms the reports from practically all of the paper jobbers and of the principal paper brokers in Los Angeles at the present time.

J. R. Coffman, secretary of the Los Angeles Paper Trades Association, is away on his annual vacation. He expects to be back at his desk about November 1.

Charles W. Walker to Go to Three Rivers

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., November 1, 1926.—Charles W. Walker, general mill superintendent of the Hudson River mill of the International Paper Company, is to be transferred from Corinth to the extensive I. P. plant at Three Rivers, province of Quebec, according to information given out here this week. Mr. Walker has been superintendent of the International plant here for the past twelve years and since his first connection with the local mill has been exceedingly popular with the thousand or more employes under him.

The transfer it is understood is in the nature of an advancement for Mr. Walker and is in recognition of his valuable services in directing production at the local mill since 1914. The Three Rivers plant is considerably larger than the Hudson River Mill with its ten machines. The machines in the Canadian mill are also said to be much larger than those in the local plant.

In going to the Three Rivers mill the superintendent, Mr. Walker, will succeed Mr. Murray, formerly of Fort Edward, who has been in charge of the Three Rivers mill since its establishment. Mr. Murray was recently transferred to another of the I. P. Company's Canadian plants.

Mr. Walker's successor as superintendent of the Corinth mill has not yet been announced but the new superintendent is expected here in the near future from the main offices of the corporation in New York. Mr. Walker plans to leave for Three Rivers some time during the coming week. A number of farewell receptions and testimonial dinners are being planned for him before his departure for the Canadian city.

RYTHER AND PRINGLE COMPANY
CARTHAGE N.Y.

PULP

Dry Sheets or Rolls

REDUCED IN THE

RYTHER SHREDDER

Is Torn into

SMALL RAGGED PARTICLES
THOROUGHLY DAMPENED

and Ready for

BEATING OR SLUSHING

LET US DEMONSTRATE

FOR CANADA REFER
CANADIAN INGERSOLL-RAND CO., LIMITED
260 ST. JAMES STREET, MONTREAL, P.Q.

Paper Demand In Toronto Continues Fair

Paper Converter Getting Busy for Holiday Trade—Some Varieties of Paper Makers' Stock Sell In Large Quantities But Others Are Slow—Manufacturers of Paraffin Paper Want Higher Classification—Strike of Pulpwood Workers Is Partially Settled

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ontario, November 1, 1926.—Conditions in the paper market continue fair and business is proceeding along regular lines. The paper converting trade is operating lightly so far as current orders are concerned but plants have been busy since September last in getting out greeting cards, Christmas gifts and papeteries. The blank book and office supply stationery lines are generally quiet owing to draggy business in a number of commercial lines and the tendency of certain firms to economize as far as possible.

In the rag and paper stock market dealers report that board mills are taking large quantities of cuttings but the purchases of waste paper from the book mills have fallen off some. The collection of stock generally is good but dealers could dispose of more in some lines than they are receiving. Cotton rags are a drug on the market at present but there is a very good call for roofing stock.

The printing trade generally is operating lightly but there is a fair requisition for the products of lithographers, electrotypers and similiar trades.

The twine situation is quiet just now and there has been some decline in prices. Sea Island twine is quoted at fifty cents per pound wholesale, which is a drop of five cents; jute twine is down a cent to a cent and a half per pound. The demand for cotton twine is light and four ply is being disposed of at twenty-five cents per pound.

A new price list has been issued on wrapping papers by the wholesale trade, which gives the following figures on ton lots per hundred pounds, inclusive of sales tax-kraft m. f. $8.90; kraft m. g. $9.05; fiber and No. 2 kraft papers, $7.90; B manila, $6.80; grey $5.80. At these quotations, each of the quantities is to be in one shipment at one time to one party at one place, with cartage at destination on shipments, f. o. b. points.

Progress in Mattagami Case Halted

An examination of Sherwood Aldrich, taken in a sanitarium in New York City in connection with the trial of the validity of the debenture issue of the Mattagami Pu'p and Paper Company, Smooth Rock Falls, Ont., for $3,945,000 was produced before Charles Garrow, Master of the Supreme Court in Toronto during the past week. In the trial, counsel for the trustee-in-bankruptcy attacked the validity of the debenture issue, which was defended by I. W. Killam, of Montreal, who recently purchased the property of the Mattagami company at the public sale. Mr. Killam is the holder of a large block of debentures, which he proposes to turn over at their par value in payment of the purchase price. Mr. Aldrich was one of a group of twenty wealthy Americans, who were interested in the Mattagami Company. He denied giving his consent as provided by the charter of the company to the issue of the debenture stock secured by mortgage of the Montreal Trust Company or to any charge securing these debentures. Before his examination was completed, Mr. Aldrich stated that he could stand no more and the session terminated abruptly. Counsel for Mr. Killam declared that he could not go on with the defense until the examination of Mr. Aldrich had been completed and certain correspondence had been produced. The hearing was then adjourned until November 9 to see whether the examination of Mr. Aldrich could not be completed by that time. W. N. Simpson, transfer officer of the National Trust Company gave evidence as to preferred shares held by Mr. Aldrich.

Want Higher Paper Classification

Manufacturers of paraffin paper which is used in wrapping butter, meat, fish, etc., recently waited upon Hon. J. A. Robb, Acting Prime Minister, Ottawa, and said the Government saw no reason to change the previous decisions of the Customs Board which had refused any change. He suggested that the matter might be one for the consideration of the Tariff Advisory Board and it is understood the manufacturers intend to make a similar application shortly through that body.

Pulpwood Cutters Strike Ending

The strike of the pulpwood workers which has been proceeding for some time in the Thunder Bay district, is partially settled. Four hundred cutters have been released to pulpwood contractors, agreeing to the revised wage scale which calls for $60 a month and board when working by the month; $5. for cutting a cord of pulpwood, 8 ft. long and $3. for a cord of wood, 4 ft. long. It is understood that the men who have returned, will work for the operators who have expressed a willingness to meet their demand. The strike will be continued against those operators who have been holding out. The attempt to import men from Winnipeg and other points in the West, was not a distinct success.

Paper Chart for Schools

The Canadian Paper Company, Windsor Mills, which has warehouses in Montreal and Toronto, has issued a large display sheet on offset paper giving a comprehensive description of the processes of pulp and paper making. There are colored illustrations of the different departments of a pulp and paper mill, which, along with the text matter make the sheet very attractive and suitable for hanging up in an office or school. Many applications have been made to the Canada Paper Company by educational institutions for copies of the chart. Views of the St. Francis and Windsor mills of the company are also shown.

Notes and Jottings of the Industry

It has been decided to hold the annual convention of the Canadian Paper Trade Association in Montreal during the fourth week in January next.

I. H. Weldon, President of the Provincial Paper Mills, Toronto and S. F. Duncan, Treasurer of the same company, are gone on a moose hunting trip in the Port Arthur district.

N. L. Martin, of Toronto, Secretary of the Canadian Paper Trade Association, is enjoying a deer hunting vacation at Hartley Bay in the French river district, with several other members of the Hartley Bay club.

A visit was paid recently to the pulp and paper mills of Port Arthur and Fort William by St. Nihal Singh, of Bombay, India, noted lecturer and journalist. The world famed traveler was much interested in the process of manufacture and is gathering data for a book on "Canada."

Fred W. Halls, of the Fred W. Halls Paper Company, Toronto, has gone on a hunting trip to Northern Ontario along the Algoma Central Railway and epects to capture his full quota of deer.

H. F. E. Kent, of Toronto, President of W. J. Gage & Co., wholesale paper dealers and manufacturing stationers, spent the past few days in Montreal on business.

Cecil Reid, of the Western Quebec Paper Mills, St. Andrews East, Que. was in Toronto last week calling upon the trade.

T. J. Allen, vice president of Paper Sales, Limited, Toronto, spent the past few days on business in Montreal.

A. Huntley, of the Hodge-Sheriff Paper Company, Toronto, was in Three Rivers, Que., lately visiting the plant of the Wayagamack Pulp and Paper Company.

WHEN a valuable piece of machinery is destroyed or injured by accident, the superintendent wants to know who was to blame. He knows that few accidents can really be classed as "unavoidable." But when a machine is injured or temporarily rendered useless by the premature wearing out of a bearing, no investigation is made, as a rule. It is taken for granted that machinery must wear out. If it wears out sooner than it should, it's just bad luck—or if anybody is to blame, it is the maker of the machine.

Some day, perhaps, knowledge of the science of lubrication will be so general that the premature wearing out of machinery will be looked upon in its true light—as an accident which could easily have been avoided by the more careful selection of lubricants.

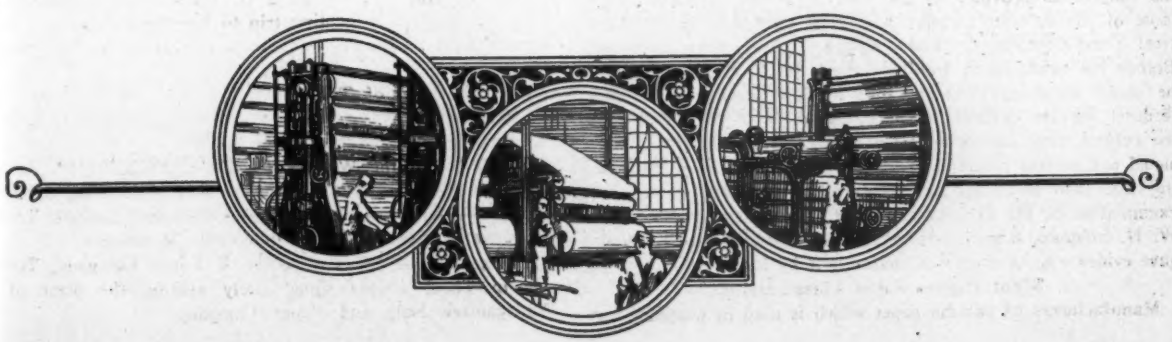
Meantime, plant superintendents who have familiarized themselves with this modern science are saving money for their companies by using the correct grades of

Standard Oils and Greases

Standard Oils and Greases are made in many grades to meet the lubrication requirements of every kind of machinery in use in modern industrial plants.

Our representative will recommend the grades of lubricants which will help to eliminate avoidable "accidents" of this kind in your plant.

STANDARD OIL COMPANY
(INDIANA)
910 South Michigan Avenue Chicago, Illinois



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Cloquet, Minn.—The Northwest Paper Company has work under way on a new addition to its plant, and is awarding miscellaneous contracts for early completion. The expansion is being handled by day labor and consists of a main two-story unit, 100 x 190 feet, to be used largely for storage and distributing service, and a three-story office, 50 x 68 feet. The structures will cost close to $100,000, with equipment. The Jacobson Engineering Company, 430 Oak Grove street, Minneapolis, Minn., is engineer. R. M. Weyerhauser is president.

Cincinnati, Ohio—The Sabin-Robins Paper Company, Ludlow avenue, has filed plans for alterations in its plant, for which a contract has been let to the J. R. Stevens Company, Cincinnati.

Wabash, Ind.—The United Paper Board Company is reported to be planning the construction of a new addition to its mill, the proposed work to proceed early in the coming year. It will be one-story, 60 x 300 feet, estimated to cost approximately $60,000, with equipment.

East Walpole, Mass.—Bird & Son, Inc., manufacturer of paper roofing and affiliated products, has awarded a general contract to J. Gascoigne & Company, Boston, for a one-story addition to its building known as BM. It will be used largely for storage and distributing service. Monks & Johnson, 99 Chauncy street, Boston, are engineers.

Scottsville, Va.—D. H. Pitts, P. O. Box 175, is at the head of a project to establish a local pulp mill. A company will be organized, it is understood, at an early date. Inquiries are being made for pulp grinding machinery and auxiliary equipment.

North Bergen, N. J.—The International Folding Paper Box Company, 396 South Second street, Brooklyn, N. Y., has awarded a general contract without competition to Bonanno Brothers, 388 Bergenline Avenue, Union City, N. J., for the erection of its proposed new mill at the North Jersey Industrial Terminal, North Bergen, to be two-story, 100 x 260 feet, reported to cost in excess of $200,000, with machinery. The company purposes to remove its present plant to the new location upon completion of factory.

Rothschild, Wis.—The Marathon Paper Mills Company has completed plans for the construction of a new two-story and basement building, to be 40 x 85 feet, designed for general operating and office service, estimated to cost about $32,000. A general contract has been let to Schaefer & Olson, Chippewa Falls, Wis. Orbison & Orbison, Appleton, Wis., are architects and engineers. C. C. Yawkey is president.

Pittsburgh, Pa.—The Republic Bank Note Company, 2817 Forbes street, manufacturer of paper specialties, has plans nearing completion for superstructure for its proposed new three-story and basement plant, 90 x 140 feet, at 2123-27 Forbes street, estimated to cost close to $300,000, with equipment. It is expected to ask bids at an early date. Hunting, Davis & Dunnells, Century Building, Pittsburgh, are architects.

New York, N. Y.—The Aldine Paper Mills, Inc., 1270 Broadway, New York, has leased a floor in the new building at 333-39 Hudson street, totaling about 20,000 square feet of floor space, and will establish a new storage and distributing plant at this location. The present works of the company at 541 West Thirty-fourth street, will be removed to the new location. Harry E. Goldberg is president.

St. Paul, Minn.—The American Container Corporation, Front and Mackubin streets, has taken out a permit for the erection of a one-story addition to its plant, 30 x 100 feet, and will proceed with work at once. A general contract has been let to Steenberg Construction Company, Builders' Exchange, St. Paul.

Toronto, Ont.—I. W. Killam, president of the Royal Securities Corporation, Montreal, Que., recent purchaser of the mills and assets of the Mattagami Pulp & Paper Company, secured for a consideration said to be $7,250,000, is said to be arranging for the continued operation of the organization, including mills, timber properties, etc. Improvements are reported to be under advisement.

Kapuskasing, Ont.—In connection with its proposed pulp and paper mill, and hydroelectric power plant development, the Spruce Falls Power and Paper Company, Ltd., Toronto, will locate its mill at Kapuskasing, while the hydroelectric power development will be carried out at Smoky Falls. The new mill will consist of a complete operating unit, including ground wood pulp and finished newsprint; the complete project is estimated to cost in excess of $10,000,000.

New Companies

Rochester, Mich.—The Rochester Paper Company, has been incorporated with capital of $100,000, to manufacture papers and paper specialties. The incorporators are E. B. Osborne and E. L. Barnes and M. B. Hudson, 501 Third street, Rochester.

Philadelphia, Pa.—The Anderson-Bechman Company, has been incorporated under Delaware laws, to manufacture and deal in papers, cardboard, and other paper specialties. The company is represented by the Corporation Guarantee & Trust Co., Land Title Building, Philadelphia.

New York, N. Y.—The Sharp Paper and Specialty Company has been incorporated with capital of $25,000, to manufacture and deal in paper products. The incorporators are A. Last, A. Gilbert and L. Brinker. The company is represented by D. B. Tolins, 51 Chambers street, New York.

New York, N. Y.—The Ornamental Fibre Products Corporation, New York, has been incorporated with capital of $2,000, to manufacture and deal in fibre specialties, etc. The incorporators are C. A. Feldman and J. E., and J. L. Vorbach. It is represented by D. A. Frazer, 258 Broadway, Brooklyn.

Wilmington, Del.—The North American Paper Company, care of the Corporation Trust Company of America, duPont Building, Wilmington, has been incorporated with capital of $20,000, to manufacture and deal in paper.

Hoboken, N. J.—The Hoboken Paper Box Company, Inc., 307 Newark street, has filed notice of reorganization with increase in capitalization to $50,000. The company was organized originally in 1919, and is headed by Morris Schur.

BLEACHED and UNBLEACHED
SULPHITES
KRAFT PULPS
GROUND WOOD
NORRONA
PULP STONES

PERKINS-GOODWIN CO.
33 WEST 42nd STREET
NEW YORK

PAPER
PRINTING PAPER
of
EVERY DESCRIPTION

New York Trade Jottings

O. J. Goeppinger, engineer for the Armstrong Hachine Works, Three Rivers, Michigan, is visiting the trade of New York..

* * *

Vincent Jones, of the Anglo-Newfoundland Developing Company, Grand Falls, Newfoundland, is spending several days in New York. Mrs. Jones accompanies him.

* * *

The Salesmens' Association of the Paper Industry held its regular weekly luncheon last Monday. No special speaker was featured, but the attendance was good.

* * *

Dr. Hans Wrede and Mr. Edward Stoffel, of Germany, came to the Association last week with letters of introduction from the German Association of Paper Manufacturers. Dr. Wrede was in this country as a technical man in 1912 and '13 but Mr. Stoffel is making his first visit to this country.

* * *

R. S. Kellogg of the Newsprint Service Bureau, 342 Madison Avenue entertained officials of the G. A. Serlachius Aktiebolag Sulphite and Paper Mills, Finland at a luncheon last Monday. The officials who visited New York after an extensive tour through Canadian mills, were Colonel Gosta Serlachius, owner of the company; his son, R. Eric, and his technical manager Harry Alfthan. Colonel Serlachius and Mr. Alfthan, will return to Finland the last of this month. Young Mr. Serlachius will remain in America.

* * *

R. S. Kellogg, of the Newsprint Service Bureau, was in Washington last week attending the meeting of the executive committee of American Forest Week, of which he is chairman. While here he also visited General Lord, Director of the Budget in connection with appropriations for forestry to be submitted to the coming session of Congress. He also visited a number of government officials during his stay.

* * *

An income of $175,455 annually accrues to International Paper Company through the recent inauguration of dividends from stock of the New England Power Association. International holds 116,970 shares of this stock, which was purchased in 1925 in order to form a connection through which it could market surplus power. Income from its New England Power stock is equivalent to 35 cents a share annually on the 500,000 shares of International Paper common stock outstanding, on which the present dividend is $2 a year.

* * *

The Aldine Paper Mills, Inc., Harry E. Goldberg, president, have leased from the Hudson-Charlton Corporation the entire ground floor and basement, with approximately 20,000 square feet of space in the new Hudson-Charlton Building, 333 to 339 Hudson street. The lease is for a long term of years. Thoens & Flaunlacher, Inc., were the brokers in the transaction. Mr. Goldberg said the warehouse now located at 541 West 34th street and the executive offices at 1,270 Broadway would be combined in the new location. A number of paper dealers have located in this section of the city, and the addition of the Aldine Paper Mills greatly increases the amount of space now being used by that trade.

Westminster Paper Co. Offers Bonds

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., October 30, 1926.—The Westminster Paper Company Limited, of New Westminster, B. C., is offering through the Lumbermen's Trust Company of Portland, Ore., an issue of First (Closed) Mortgage 6½% Serial Gold Bonds in denominations of $1,000, $500, and $100. The bonds are dated October 1, 1923 and are due serially 1928-1937. Principal and semi-annual interest April 1, and October 1, payable in United States Gold Coin, of, or equal to, the present standard of weight and fines, without deduction of United States of America Federal Income Tax up to, but not exceeding, 2 per cent per annum, or any tax imposed within the Province of British Columbia or Dominion of Canada. Registerable as to principal only. Bonds redeemable at 102 and accrued interest as a whole or in part, but if in part, by lot, on the first day of any month upon fifteen days published notice.

The Westminster Paper company is engaged in the manufacturing of wrapping and tissue paper, paper napkins, towels, fruit wrappers and other light weight paper specialties. The plant is located on the Fraser River with rail transportation and deep water facilities.

The company's United States business is handled through its subsidiary company, the Pacific Coast Paper Mills, a Washington corporation located at Bellingham on Puget Sound.

The issue of bonds will be a direct obligation of the Westminster Paper Company Limited and secured by a first (closed) mortgage on all of the fixed properties of the Company including buildings, plant, equipment, rights, franchises, and similar properties.

The Company proposes to use the proceeds of this bond issue to purchase $100,000 First Mortgage 6½ per cent Gold Bonds of its subsidiary pledge, the Pacific Coast Paper Mills, the latter company to use the funds for the enlarging of the plant at Bellingham, Washington, and complete the installation of necessary new machinery and equipment. The remainder of the proceeds after this improvement is made at the Bellingham plant will be used for the installation of additional machinery and equipment at the Westminster plant.

Paperboard Industries Association to Meet

The next meeting of the Association, which is the Annual Meeting, will be held at the Waldorf-Astoria Hotel, New York City. Wednesday, November 17 and Thursday, November 18, 1925.

This is the annual meeting at which officers will be elected for the ensuing year. Plans will also be outlined at this meeting covering work to be undertaken during the coming twelve months.

On Wednesday, November 17, there will be a meeting of the Folding Box Group in the morning and of the Paperboard Group in the afternoon. The Container Group Meeting will be held on Thursday morning, November 18, the General Meeting of the three Groups in Joint Session convening at 2:00 P.M., Thursday afternoon.

The schedule of the meetings is as follows:

WEDNESDAY, NOVEMBER 17, 1926:

9:45 A. M.— 1:00 P. M.—Meeting of *Folding Box Group*.

2:00 P. M.— 5:30 P. M.—Meeting of *Paperboard Group*.

THURSDAY, NOVEMBER 18, 1926:

9:30 A. M.—12:45 P. M.—Meeting of *Container Group*.

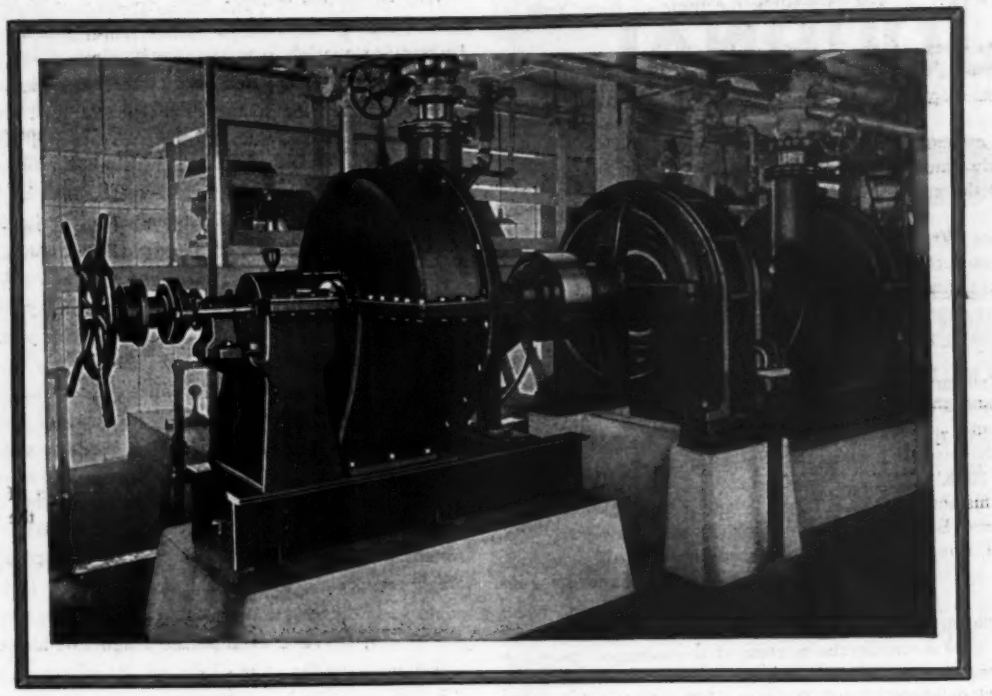
1:00 P. M.— 2:00 P. M.—Luncheon—all members—"The Roof Garden."

2:00 P. M.—5:30 P. M.—Meeting of the 3 Groups in Joint Session.

As a special feature pursuant to the plan outlined at the last meeting, there will be an informal dinner, Thursday evening, November 18th, following the business sessions. There will be talks by the retiring and incoming officers, as well as by some of the members.

Evansville Bag Co. Incorporates

INDIANAPOLIS, Ind., November 1, 1926.—Articles of incorporation have been filed with the secretary of state in Indianapolis by the Evansville Bag Company, Evansville, Ind. The company has a capital stock of 250 shares of no par value and will manufacture paper and canvass bags, deal in all sorts of containers and paper products and twine. The incorporators are Frank Endress, Jr., Frank Endress, Sr., and Jacob Endress.



Tons of Standard Quality Pulp Saved from the Waste Pile

What would it be worth to you to save, every day, 2 to 6 tons of ground wood pulp that you are now throwing out on the waste pile?

The new Valley Refiner is accomplishing this, making savings of thousands of dollars for its users during the past year. The Valley Refiner not only eliminates waste but it turns waste into a profitable product. The continuous savings effected demonstrate that this machine is a long term, high yield investment rather than a purchase. The machine has low power requirements and many advantages of construction. You owe it to yourself to learn more about the Valley Refiner.

WRITE TODAY
for
Refiner Booklet

Write at once for full information about the remarkable waste saving possibilities of the Valley Refiner. The full particulars regarding this machine will prove interesting to any ground wood manufacturer and will be furnished on request. Write today for your copy of the new Refiner booklet.

VALLEY IRON WORKS CO.

APPLETON, WISCONSIN

New York Office: 350 Madison Avenue

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXIII New York, November 4, 1926 No. 19

INDUSTRIAL TRAINING, A MUTUAL OBLIGATION

AN EDITORIAL BY T. L. CROSSLEY OF THE JOINT COMMITTEE ON VOCATIONAL EDUCATION IN THE PAPER INDUSTRY

Sounds like a picture title. It isn't. It has to do with the follies.

The men of ——th Battery Coast Artillery were paraded for inspection soon after going into rest billets. The commander announced he was to supply a despatch rider and asked any man who felt like volunteering to advance two paces. The whole line stepped forward except one man. The commander sharply called him out and asked why he didn't volunteer with the rest. "You called for volunteers, sir, and I don't want that job; I know what those baby carriages are like." "Well, you've got the job." For three weeks he had that job, made a daredevil rider, chiefly at night, in darkness, smashing several machines in shell holes, taking great risks, and doing good work. The commander guessed he had the courage and individuality. He was not afraid to stand alone. He knew the risks and didn't want the trouble. War conditions made it possible to compel him.

Just how far should the management of a mill go in requiring its personnel to study the industry? Volunteers have been called for under various offers of incentive. The voluntary response is somewhere inside of five per cent of the personnel. At times the management of a mill has certain bright able men in mind, who need just a little better knowledge of principles. The bright able man has frequently not responded, but on the other hand men with little ability or education step forward, and having no mental background drop the work soon after starting, or by perseverance plod through the course, but finding no promotion, become discouraged and sore.

What line of action is indicated?

The rapid development of intricate machinery, of large production and delicate adjustment, has not been met by adequate preparation of the men who have inherited the task of operating it.

Should the employe be left to depend on the chance acquisition of unbalanced experimental knowledge, the empirical but much vaunted, so-called practical experience, at the expense of the firm and the risk of his fellows?

Should the management responsible for an investment of vast sums in modern machinery and buildings stake chances of profit or loss on individual ideas of what constitutes an obligation to serve?

Why should the employe study his job? The casual answer is to secure promotion and increased earnings. Logically that would be studying one job to prepare for another, which is absurd.

Some industries are tied hard to the old idea of pay based on the job, and not the man. It's the line of least resistance. If a man can't earn more on his job, why should he study? The answer, for the man of limited intelligence who may have little chance of rising, is that he may thereby extend his industrial life, deferring for some years his committal to the junk heap.

There are undoubtedly men who cannot study, but they are vastly outnumbered by the men who will not. Watch the man who watches the clock and heads the line on pay day, who makes no attempt to advance and favors the seniority plan. He is often an astute poker player. He knows the strategy of baseball. He drives a car and discusses the qualities of gasoline. He has a radio set, and knows the functions of -odynes and -otrons. In industry he is static, not because he can't learn, but because he won't learn. Even on the job with which he is familiar, he operates at a low rate of efficiency. Is anything gained by inviting him to join a class or take a course? Does he not need as much as anything a booted stimulation from the rear? In a democratic country and mixing metaphors, that would be considered high handed. It would be if the matter were only one of his own interests, but it goes deeper. It affects the property rights of his fellow employe by holding down the value of the job. It affects the property right of the firm that he has contracted to serve, by keeping down the returns from investment in plant and machinery.

But what about the management? Should it expect employes to give their own time and spend their own money to enable them to become more valuable servants of the industry?

Undoubtedly it is to the employe's interest, either in the matter of promotion or extension of industrial life, to acquire a more intelligent conception of his place in industry.

It is also indisputably to the interest of the management that the individual should have that higher conception.

The matter, therefore, has every appearance of mutual interest and the solution of industrial training appears to be somewhere in the following considerations:

Duties of management: 1. Provision of means. 2. Financial outlay.

Duties of employe: 1. Sacrifice of time. 2. Undertaking more responsibility.

In everyday life, as in warfare, human frailty prevents operation under voluntary conditions, especially in mass production. Hence the time clock must be introduced. We are forced to a mutual consent to involuntary conditions. These tend to become voluntary as it becomes evident that they are mutually profitable.

It appears therefore advisable for managements to provide and finance opportunities for study, and reasonable for them to exert some pressure on all employes to take up some form of study to increase their own value. This would entail, of course, a due recognition of that increased value.

But have we exhausted the possibilities of the voluntary system? Has every firm made it attractive to the ambitious man to study? Those that have done so find it pays.

Canada's Paper Exports Increase

The monthly report issued by the Canadian Pulp and Paper Association, shows that exports of pulp and paper in September were valued at $15,219,210, an increas of $1,268,389 over the total for the previous month.

Exports of wood-pulp in September were valued at $5,133,406 as compared with $3,614,875 in August and exports of paper at $10,085,804 as compared with $10,335,948 in August.

Detailed comparison with the totals for September 1925 and 1926 as shown below:

	September 1926		September 1925	
	Tons	$	Tons	$
PULP:				
Mechanical	58,246	$1,910,517	40,127	$1,223,991
Sulphite Bl.	16,404	1,325,659	17,308	1,331,750
Sulphite Unbl.	19,034	1,071,182	26,286	1,520,860
Sulphate	13,390	826,048	13,694	766,625
	107,074	$5,133,406	97,415	$4,843,226
PAPER:				
News print	143,524	$9,460,633	116,278	$8,190,090
Wrapping	1,627	192,779	1,737	235,864
Books (cwts)	6,350	54,699	3,953	36,623
Writing (cwts)	2,220	16,351	598	4,460
All other		361,342		375,843
		$10,085,804		$8,842,780

The value of the pulp and paper exports during the first nine months of the year amounted to $127,090,721, an increase of $15,570,856 or 14 per cent over the value for the corresponding months of 1925.

Exports of wood pulp in this period were valued at $38,371,467 and exports of paper at $88,719,254 compared with $34,181,917 and $77,337,948 respectively in the first nine months of 1925.

Figures for the nine months are as follows:

	9 months 1926		9 months 1925	
	Tons	$	Tons	$
PULP:				
Mechanical	275,387	$8,343,600	227,765	$6,701,435
Sulphite Bl.	150,024	11,722,462	138,165	10,350,878
Sulphite Unbl.	186,406	10,585,650	192,781	10,363,654
Sulphate	121,039	7,719,755	110,492	6,765,950
	732,856	$38,371,467	669,203	$34,181,917
PAPER:				
News print	1,262,340	$83,192,275	1,017,500	$71,713,472
Wrapping	14,284	1,768,084	15,728	2,135,963
Book (cwts.)	41,852	360,951	30,668	286,309
Writing (cwts.)	15,561	115,893	8,234	69,887
All other		3,282,051		3,132,317
		$88,719,254		$77,337,948

Pu'pwood exports have been smaller this year than in 1925, the total for the nine months being 1,112,764 cords, valued at $11,064,662 compared with 1,185,495 cords valued at $11,775,969 in the nine months of 1925.

Sunday Work in Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

ALBANY N. Y., November 1.—William R. Smith, president of the International Brotherhood of Papermakers, is back at organization headquarters in this city after a seven weeks' automobile trip that took him through New England, the Middle West and Eastern Canada, during which time he visited many papet mills. In discussing the trip, President Smith spoke of a rather interesting situation that is commanding the attention, at the present time, of both the owners of paper mills in Quebec and the men employed in the mills.

According to the Brotherhood president the Lord's Day Alliance in the Province of Quebec is waging a fight to close all paper mills on Sunday, the aim being to have the mills close at 12 o'clock Saturday night and remain closed until 12 o'clock Sunday night. At the present time it is customary for the mills to shut down machines from 8 o'clock Sunday morning until 8 o'clock Monday morning, this being a union regulation holding good not only in Canada but throughout the United States.

Arthur Huggins, of Holyoke, Mass., one of the vice-presidents of the Brotherhood, who has been in charge of the union's office at Three Rivers, Quebec, for some time past, is engaged in a campaign opposing the change advocated by the Lord's Day Alliance.

A new local union has been organized at Port Alfred, Quebec, through the activities of Mr. Huggins and this union has already been granted its charter. Other locals in the vicinity of Three Rivers are in process of formation.

Leaving Three Rivers, President Smith went to Montreal where he attended the opening session of the Pulp, Sulphite & Paper Mill Workers' Union in annual convention, going later to Detroit, Mich., to attend the sessions of the American Federation of Labor. He spent much of the time at Detroit in an effort to bring about increased use of union watermarked paper by labor organizations who issue bulletins or publications at regular intervals.

President Smith in his seven weeks' trip was enabled to secure first hand information of prevailing conditions in the Eastern United States, Canada and the Middle West States. With the exception of mills in Holyoke, Mass., he said that all paper mills in the sections visited are running on full time and business is very good. He noted some improvement in business conditions in Holyoke but mills in that city are still operating below normal. In all other sections men are working full time and finding employment. In the Middle West business conditions are on a par with the East, he said, and at least one company located in Kalamazoo, Mich., is installing a new machine at the present time to meet the demands for increased production.

The Brotherhood president stated, in speaking of the scheduled convention of the organization to be held next March, that he had received letters from the Allied Trades' Council of Watertown, and the Watertown Chamber of Commerce asking that the convention be held in that city but he said that no definite decision would be reached until the meeting of the executive board which will convene in Albany next January. While Watertown was, until recently, favored by many there is said to have developed a strong sentiment for either Montreal or Albany as the convention city and it is understood that these two places are now leading by a considerable margin in the contest to secure the convention. The fact that the headquarters of the Brotherhood is located in this city is believed to be in favor of Albany.

Forestry Committee To Ask for $1,000,000

WASHINGTON, D. C., October 27, 1926.—General Lord, Director of the Budget, was yesterday asked to allocate a million dollars a year for the Forest Products Laboratory of the United States Forest Service, to enable it to continue and extend its researches into the mechanical and chemical properties, characteristics, and behavior of wood under varying conditions of use.

The request was presented on behalf of the American Forestry Program Committee by Chairman R. G. Kellogg, secretary of the News Print Service Bureau; Ovid M. Butler, secretary of the American Forestry Association; Wilson Compton, secretary of the National Lumber Manufacturers Association, and Arthur T. Upson, wood technologist of the same organization.

The present budget of the Forest Products Laboratory is approximately $400,000, which is said by the Committee to be wholly inadequate for scientific research concerning the utilization of the forests, which occupy more land than all of the activities of agriculture. The Committee estimates the present annual loss of material in the process of forest utilization as equivalent to approximately $600,000,000. It is beileved that by concerted effort of the forest using industries, the consumers of forest products and adequate scientific research it is possible now to recover over $300,000,000 of this annually.

Index Number for Paper Lower

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 2, 1926.—September paper production index number for September was 119 compared with 122 for August and 160 for September of last year, taking 1919 at 100 per cent according to the Department of Commerce.

If You Want to—

Increase your Beating Capacity

Reduce your Power

Economize on Mill Space

Improve your Stock

Lower your Costs

All for a very nominal expenditure,

Let Noble & Wood Figure on Remodeling Your Present Beaters

No one type of beater is ideal for all kinds of stock. We have several NEW types of HIGH SPEED-HIGH DENSITY BEATERS, some one of which will best suit your conditions.

We will gladly make a survey of your situation and submit a proposition without cost or obligation to you.

Write us today

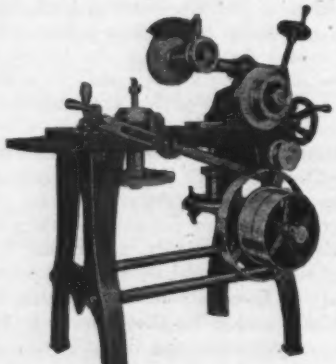
THE NOBLE & WOOD MACHINE COMPANY

HOOSICK FALLS, N. Y.

Most Every Paper Mill Has Koegel Equipment

Over 800

Standard Koegel Patent Universal Slitter and Circular Knife Grinders are in the paper and pulp mills of the United States and Canada. What greater evidence could be offered for the universal service this grinder renders?

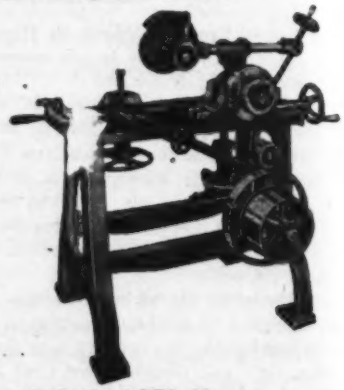


THE STANDARD
Capacity—8½-inch Diam. Slitters

Specifications: Floor space, 27" x 42"; speed of spindle, 55 revolutions; driving pulley, 9"x2½"—speed, 400 revolutions; emery wheel, 7"x½"—speed, 3,000 revolutions; weight, about 425 lbs.

For Greater Capacity

The Koegel No. 4 Patent Universal Slitter and Circular Knife Grinder is built for Slitters up to 16" in diameter. In mills where larger diameter knives and slitters are used, 150 are in service.



Here are the specifications: Floor space, 32"x52"; speed of spindle, 55 revolutions; driving pulley, 10"x2½"—speed, 400 revolutions; emery wheel, 8"x½"—speed, 3,000 revolutions; weight, about 525 lbs.

THE KOEGEL No. 4
Capacity—16-inch Diam. Slitters

CHAS. KOEGEL'S SONS, Inc.

Slitters and Specialties

HOLYOKE MASSACHUSETTS

Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

Marathon to Make Swamp Drainage Experiment

Greatly Increased Growths in Spruce Swamps Will Be Obtained Through Superficial Drainage

By Dr. Raphael Zon, Director Lake States Forest Experiment Station

At the formal opening of the Upper Peninsula Field Station of the Lake States Forest Experiment Station near Marquette, Michigan, on September 8, the staff of the station gave a demontration of ditch digging by dynamite. This demonstration was given in a typical spruce swamp area for the twofold purpose of showing the possibilities of the use of dynamite in such cases, and providing a superficially drained swamp area for the study of increased growth resulting from superficial drainage. Dr. Raphael Zon, director of the station, also had a number of charts in a nearby building showing graphically the greatly increased yield which will follow such drainage.

D. C. Everest, of the Marathon Paper Mills Company, who is a member of the Advisory Committee of the Lake States Forest Experiment Station, was present at the demonstration. He stated that his company would immediately make similar experiments on its land in the Northern Peninsula, which contains valuable stands of swamp spruce not scheduled for cutting for ten years or more, and made preliminary arrangements with Dr. Zon for the details of this work.

The possibilities of superficial drainage should be of interest to all pulp and paper manufacturers owning lands of this type, and for the benefit of those not familiar with recent drainage developments there is printed below a paper entitled "Effect of Drainage of Swamps Upon Fresh Grants" by Dr. Zon which was delivered before the National Drainage Congress at Oklahoma City on January 19, 1926, and originally printed in the February 1926 issue of *Reclamation of Farm Engineering*.

There are some 9,000,000 acres of swamps and swamp forests in the northern portion of Michigan, Minnesota, and Wisconsin. In some localities like the Upper Peninsula of Michigan, the swamps constitute nearly one-fourth of the entire land area.

Many of the swamp forests, from a productive standpoint, must be classed as almost waste land. In a typical black spruce swamp for instance, the growth is about one-tenth of a cord per acre per year. Much of this swamp forest type occurs also within the boundaries of the Superior National Forest and the bulk of the remainder of the state timber holdings in Minnesota is swamp forest.

Such swamp forests, at their present rate of growth, do not lend themselves to profitable forest management especially by private timberland owners. In the case of one private timber owner holding 150,000 acres of such swamp forest, a thorough survey showed that it would pay the owner to keep only 30,000 acres, and on the rest he would not be justified in paying even such low taxes as 8 cents per acre per year.

Yet the swamp forests are the only extensive virgin forests remaining in the Lake States region. And they are the source of pulpwood, poles, and posts—materials which are getting increasingly scarce. We have, then, a real swamp forest problem in the Lake States.

Swamp forests have received but scant consideration in this country and very little study has been made of them as such. There has been considerable drainage of swamps for farming in the Lake region, in some cases far in advance of actual needs of agriculture. As a result, many swamps which were drained at a very high cost have never been put to agricultural use. Yet the cost of the drainage had to be carried as a tax burden by the owners of the land. The drained peat swamps dry out thoroughly in summer, are very susceptible to fires, and are unquestionably a great source of disastrous fires in northern Minnesota. Furthermore, the bone-dry drainage of such swamps has tended to reduce the area of natural habitat of certain water fowl, and some hold that it also unfavorably affected the streams and lakes and therefore the fish in them. There is, therefore, a natural reaction against drainage of swamps in northern Minnesota and the subject is not popular.

Only just now it is beginning to dawn upon some people that these swamps can be made into productive forests just as hundreds of thousands of acres of such land have been made into profitable forests in Finland, Sweden, Norway, and northeastern Russia.

This has been accomplished, not by complete drainage of the swamps but only by the removal of excess water in the swamps, by converting stagnant water into moving water. The removal of excess water from such swamp forests involves a certain amount of superficial ditching. Such drainage does not make the swamp a forest fire menace, does not make land available in advance of actual needs, but converts it almost immediately into productive forest land for which there is a growing need, improves the natural cover for wild life and contributes to the regular feeding of the streams.

In Finland some 800,000 acres of such swamp lands have been drained to improve the forest growth. In Sweden the Forest Service, between 1875 and 1920, has spent $326,000 for such ameliorative works on the state forests and is at present expending annually some $116,000 for this purpose. In addition, the Forest Owners' Association of Sweden, a private organization,

during the decade 1911-1920, constructed annually on an average 1,364 miles of drainage ditches at an average annual cost of $202,000 or at an average cost of $147 per mile or at a little over 8c a yard for ditch construction.

These figures include the improvement of stream courses within and near the lands drained. On the average 66 yards of ditch are required to drain an acre of swamp land. According to these figures it would seem that the private companies drained on an average, some 36,000 acres per year, or during the ten years, a total of over 360,000 acres. A similar record can be shown for northern Russia and Norway.

The Different Swamp Forests

As a result of glaciation of the northern portion of the Lake States, there is a wide occurrence of low depressions, alternating with high land. The low depressions give rise to the many lakes, bogs, marshes, and swamps. In this discussion we are not concerned with bogs, which are very wet swamps with no forest vegetation or with only a few scattered trees, nor with marshes which are grassy bogs or swamps.

My remarks refer mostly to forest swamps; that means swamps covered with forest vegetation. It is, of course, difficult to draw a sharp line between all three kinds of low lands. All of them grade almost imperceptibly one into another. Open bogs, which have no forest trees or only a few dwarfed or stunted trees scattered singly over the area, gradually grade into swamps supporting fairly dense forests. The facts discussed here, furthermore, apply only to swamp forests of the northern Lake States. The conditions of the swamps in the South and elsewhere are very different from those in the Lake States and must be considered separately from the northern swamp forests.

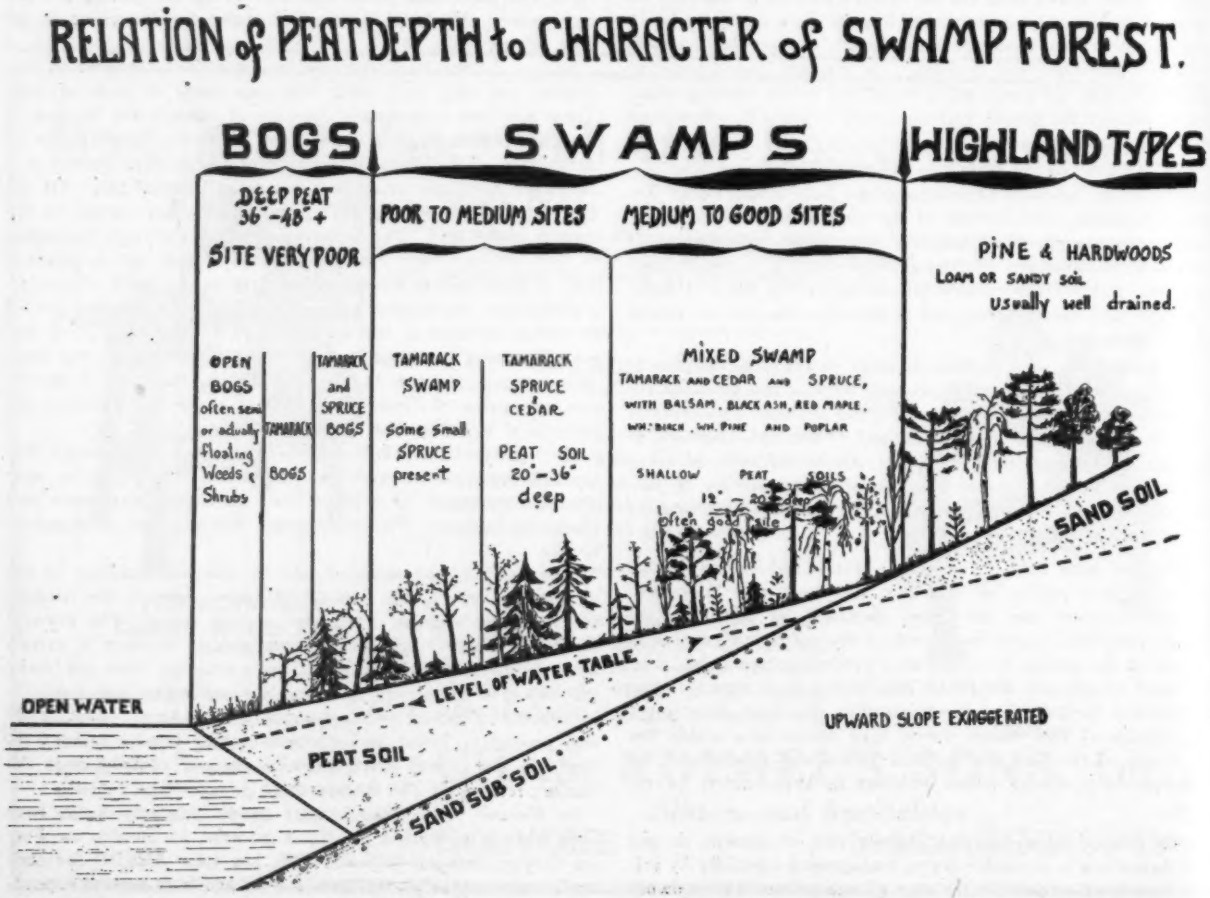
The northern swamp forest exists almost without exception on peat soil. The peat varies in depth from a few inches to 20 feet and more. Peat soil 5 feet deep is common. Usually, however, the depth of the peat is 3 feet or less.

According to the depth of peat and the wetness of the swamps, we distinguish in the Lake States four kinds or types of swamp forests; (1) tamarack swamps, (2) black spruce swamps, (3) white cedar swamps, and (4) mixed swamps. The tamarack swamps nearly always occur where peat is deep and the swamp is poorly drained. The site is always wet and free surface water is generally present in abundance. Where the peat is less deep and the swamp not too wet, the black spruce occurs, either pure or in mixture with tamarack. The white cedar occurs in swamps where the peat is not deep and the drainage is fair. The mixed swamp forests of tamarack, spruce, white cedar, balsam fir, red maple, black ash, and other species where the peat soil is very shallow and excess water runs off easily.

Cause of Slow Growth in Swamps

The forest trees growing in the swamps have a characteristic appearance which can be noticed even at a distance. They have unthrifty, low-hanging, drooping branches, often covered with lichen and moss. The needles are small. The tops of the trees are often small and poorly developed. The buds, both on the top and lower branches, are very small, often hardly visible. The roots are as a rule near the surface, and the trees are weak and easily uprooted by the wind. The stand, even when it is dense, consists of mere spindling, poorly developed trees.

The cause of this unthrifty growth of the swamp forest trees must be sought in the physical and physiological characteristics



SCHEMATIC DIAGRAM SHOWING THE VARIATION IN FOREST GROWTH UNDER DIFFERENT SOIL AND WATER CONDITIONS.

TECHNICAL SECTION, PAGE 156

of swamp soils. As has already been said, in typical swamp forests of the north the soil is peat, varying from 20 feet in depth to just a few inches. The soil is very loose, offering little firm support to the roots of the trees. The soils thaw out later in the spring and get chilled earlier in the fall than high land soil. The growing season is therefore, shorter than upland forests, sometimes by as much as six weeks. The soil temperatures during the growing season are low, around 55 degrees, Fahrenheit, barely above the temperature at which roots become active. The soils are invariably mildly acid.

The cool temperature retards the activities of the roots. The soils, saturated with water all the time, lack air. Lack of aeration of the soil lessens the breathing activities of the roots. Lack of air combined with low temperatures retard bacterial action, so essential to plant growth. The process of soil formation is very slow. Injurious acids develop and the formation of soluble nutritive elements by nitrification is obstructed. The low temperatures and wet peat slow up the decomposition of the soil and decrease mineral nourishment. Whatever nutritive elements are developed in the soil are dissolved in large quantities of water. Therefore, the solutions are weak, and if the land is at all sloping, are carried away by the moving water.

What Drainage Does to Timber Growth

These physical and physiological conditions of the soil, so unfavorable to forest growth in the swamps, may be remedied by the removal of excess water. It is not so much the actual water that causes the slow growth, but the fact that the water is stagnant, lacks oxygen, and therefore, prevents bacterial action in the soil.

From observations and experiments on the effect of drainage of swamps upon forest growth by the European forest experiment stations and our own Lake States Forest Experiment Station, the following conclusions may be drawn.

1. In swamp forests where the poor growth before drainage was due entirely to excess water, drainage causes an immediate increase in growth in all trees of Norway spruce and pine in Europe, so in the case of our own tamarack and black spruce in northern Minnesota the increase in diameter after removal of the excess water was from 2½ to 3 times under such conditions and the increase in height from 2 to 7 times, and the increase in volume from 12 to 23 times.

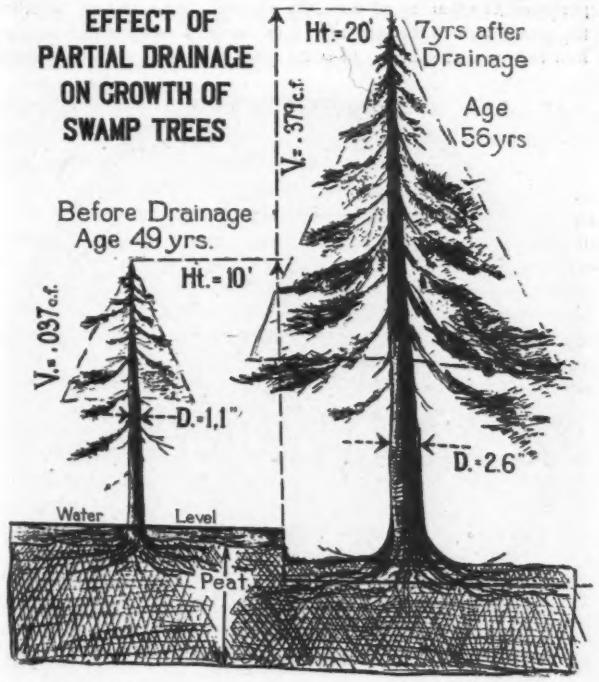
2. If the normal growth of the forest stand in the swamp is prevented not only by excess water but also by certain physical or chemical properties of the soil, the effect of drainage although it manifests itself, is not uniform and is not shown in all trees.

3. The increase in growth is considerably less in deciduous trees, such as birch and aspen, than in conifers, like spruce, pine, tamarack, and others.

4. The increased growth through drainage is influenced in spruce, tamarack, and other conifers by the depth of their roots. The more superficial their roots, the greater is the increase in growth due to drainage. The deeper the roots go into the peat, the less is the effect of drainage upon growth. All other conditions being equal, the effect of drainage, therefore, is greater upon young trees than upon old trees, on stunted trees more than on well-developed trees, and on spruce more than on the pine. This rule has practically no exceptions, because after drainage the upper layer of the soil dries out first of all and the more superficial roots in this layer first get the benefit of the removal of the excess water. The roots which lie deeper in the soil are relieved of the excess water only much later, slower, and more feebly, and at times do not feel the benefit of the drainage at all, if the ditches are not sufficiently deep or if the roots have reached already the mineral subsoil. Young trees, stunted trees, and poorly developed trees in general have more superficial roots than older or better developed trees. Drainage benefits, therefore, the trees of the poorer growth.

5. The distance from the ditch, one would think beforehand, would have a decided influence upon stimulating the growth after drainage. Yet all observations, here and abroad, show that there is no direct relation between the distance of the trees from the drainage ditch and increased growth. The effect upon growth after drainage apparently does not depend upon one factor but upon a combination of all local conditions, such as chemical composition of the soil, topography, age of tree, depth of its roots, and so on.

6. The question, when does the effect of drainage begin to show itself in trees—does it manifest itself immediately after drainage or after more or less prolonged period—still remains an open one. Apparently the effect is immediate when the poor growth before drainage was due entirely to excess of water in the soil. If the poor growth was due to conditions other than excess of water, the effect does not show itself at once but some time



A Graphic Comparison Showing How the Draining of Swamp Forest Land Affects the Growth of Timber.

after the ditch is put in. Of 29 trees analyzed as to the effect of drainage upon growth, in 15 trees the effect was immediate after the ditch was put in. In one tree the effect showed itself one year after; in another tree, two years after; in 9 other trees, 3 years after, and in 3 trees, 4 years after.

7. Drainage of swamps side by side with beneficial effect upon forest vegetation, produces also an injurious effect. If the drainage conditions in which the forest had grown up were radically changed, the old trees would begin to die out gradually as the result of the drying of the peat. Another cause of the deterioration of the old trees is the settling of the peat after drainage which exposes the roots of the trees. It must be remembered that the roots of trees grown in swamps are as a general rule superficial. They do not form any tap roots or other deep roots.

8. The drainage of swamps makes the top soil suitable for germination of tree seeds. Young growth, therefore, appears abundantly on such drained swamps. The best results, however, are attained when the moss from such peat swamps has been removed.

9. Drainage of swamps for forest purposes must not be extreme. On the contrary, it is necessary that drainage should be gradual, depending upon the success of the young growth.

10. It is a fairly wellknown fact, established by experiments,

that the water in swamps flows either on the surface or at the bottom of the peat near the subsoil, but that there is no movement of the water through the peat itself. For this reason some foresters recommend drainage down to the mineral soil, otherwise they claim there will be no effect. Yet, actual experiments show that drainage ditches that do not even extend to the mineral soil are beneficial to forest growth, while radical drainage of deep peat soils may make them actually unproductive for forestry.

Although the effect of drainage upon swamp forests is fairly understood and extensive operations of this kind are being carried on in Europe, there are still a number of questions that remain open and only further experimentation can solve. One of these is whether the wood produced by the increased growth in trees due to drainage is of good quality and as suitable for structural purposes as other wood normally formed. And second, whether the young growth that appears on the drained swamps will develop into full normal stands. In some cases the young growth showed

SECTION OF TAMARACK TREE FROM A MINNESOTA SWAMP.

This tree was growing in a wet peat swamp until 1918, when it was drained. The growth of the tree was greatly stimulated due to this drainage as shown by the width of the annual rings. The tree was cut in the fall of 1925 and the year of drainage indicated by (x).

	After Drainage	Before Drainage
Age	56 years	49 years
Diameter	2.6 inches	1.1 inches
Height	20 feet	10 feet
Volume	.379 cu. ft.	.036 cu. ft.

the same tendency to develop superficial roots although the peat was drained. In other cases, however, they developed deep roots and developed normally.

One fact is clear, that the old timber in drained swamps should be cut off soon after drainage in order to prevent its deterioration and death. It is largely upon the young growth that will come up in the drained swamps, that the forester depends for normal forest growth.

Costs and Returns

One or two examples from Sweden of the profitableness of draining swamp forests may be mentioned. A sedge bog was drained 23 years ago and is now covered with splendid fully stocked stands of young mixed forests from natural seeding in after drainage. The stands have a volume of 570 cubic feet (7 cords) per acre and the annual growth has already reached 49 cubic feet (a little over half a cord). This undoubtedly will be doubled within a few years. On one area of mixed pine forest about 60 years of age located on very swampy land, at the time it was drained in 1915, the growth was at the rate of 41.4 cubic feet per acre. Seven years later, after drainage, in 1922, the annual growth per acre reached 159 cubic feet, or an increase of 117.6 cubic feet per acre per year. The stumpage value of this timber in Sweden amounts to 5.3 cents per cubic foot. The increased growth per year of 117.6 cubic feet amounts annually to $6.23 per acre.

This almost exactly covers the cost of drainage, which amounted to $6.61 per acre. In other words, the initial cost of drainage was equal to the increased growth in the 7th year after drainage.

I do not want to give the impression that all drainage under all circumstances can prove as profitable as this. Much drainage work has been carried out in Sweden for forest purposes where the increase in growth does not yet and never can carry the interest charges upon the capital invested. And there are still other cases where the drainage has failed completely in bringing about any increase in growth. These failures serve as a warning that much judgment is required in deciding what types of swamp land should be drained for forest purposes, but in no way challenge the importance of drainage work as one of the most effective methods of increasing forest production in swamps.

It is of historic interest to mention that in Sweden, just as in this country, the first drainage work in swamps was undertaken for making the land available for agriculture, and only when such drainage proved to be unprofitable was it turned over for forest purposes. I think history repeats itself to some extent also in this country. Last summer, at the invitation of the owner, I visited a large tract of drained swamp land which was drained at a cost of some $40 an acre for agricultural purposes. After many trials, the land has been abandoned by settlers, and now the owner has an ambitious plan to plant it up to forests.

Not all swamp forests are equally susceptible to simple drainage. It stands to reason, of course, that swamps already covered with forest growth are likely to repay the drainage costs involved much more quickly than swamps that are not covered with trees at the time they are drained. Such swamps should, therefore, be considered first of all for drainage. Next would come swamps that have a more or less level bottom and outlets. The hardest swamps for forest production are swamps whose bottoms or beds form kettle-holes, sunk into the mineral soil. Such holes, as a rule, have no outlets, and the peat is formed in these holes. In the level swamps, the peat forms either upon level or sloping land. In some cases the mere cleaning out of the streams, of the slashings and debris left after logging is enough to cause a perceptible effect upon the timber growth. If that is not enough, some ditching becomes necessary.

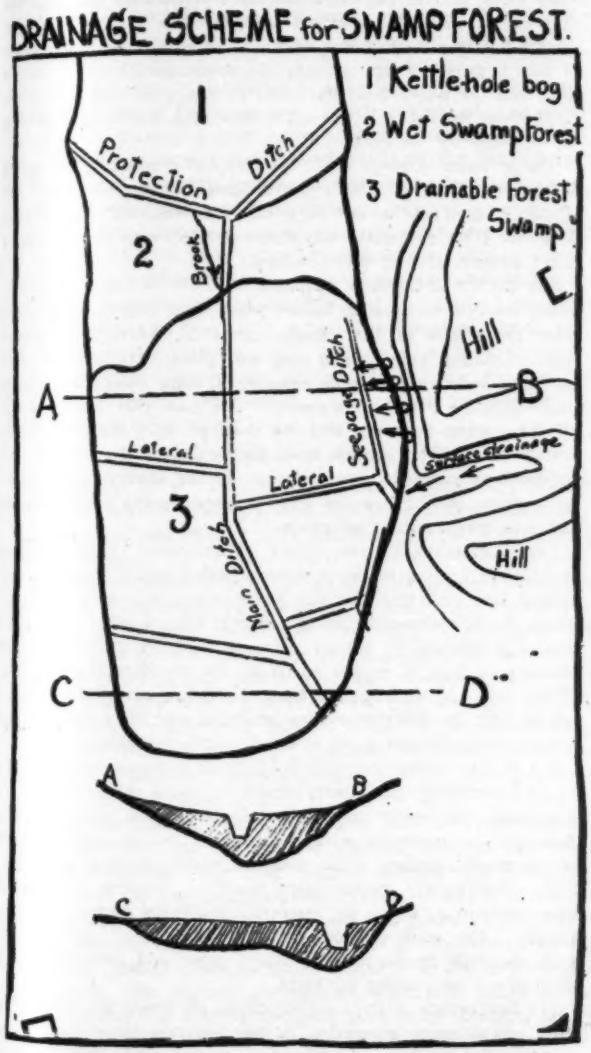
If a large swampy area consists of several kinds of bogs, some whose bottoms are kettle-holes and are hard to drain while the rest of the swamp is more or less level or slightly sloping, it may be desirable to separate the part which is hard to drain from the part easy to drain by the so-called protection ditches. Furthermore, it may be desirable to prevent the seepage or surface run-off from the adjoining territory from getting into the swamp. In such cases, seepage ditches dug at the border between the swamp and the high land down to the mineral soil will keep off the surface run-off from the adjoining watershed. Furthermore, it may become necessary to dig a main ditch across the entire length of the swamp and connect it with the stream. This main ditch should always cross the deepest peat, as otherwise it will not be effective. In some cases lateral ditches may become advisable. These lateral ditches need not be located at intervals closer than 40 to 50 yards, and in some cases even at 100 to 150 yards, if at all.

We have no cost data of such drainage for forest purposes in this country. In Sweden, where a great deal of such kind of work has been done, the most advantageous depth of the ditch is considered about one yard. As a rough average in Sweden, the length of ditch required per acre for drained land may vary from 65 to 175 or more yards. The rough average cost for draining the

better swamp forests corresponds to from four to eight days' work per acre. The cost of draining the poorer swamps and level bogs corresponds to from eight to twelve days' work per acre. While the kettle-holes can not readily be drained at a cost less than from twelve to sixteen days' work per acre.

At the wages prevailing in Sweden for this kind of labor, the rough average cost per acre for draining swamps is close to $6. In Russia, before the war, from $2 to $4 per acre.

The Experiment Station is cooperating with the Michigan and



SHOWING HOW SWAMP DRAINAGE IS PLANNED TO PROMOTE FOREST GROWTH.

Wisconsin Agricultural Colleges in determining the cost of digging such superficial ditches by means of dynamite. It is stated that the use of dynamite may reduce the cost of ditching to one-fifth of that of ditching by hand. If the cost of ditching can be kept at or below $5 per acre, such ditching may be economically feasible. At the present price for spruce stumpage in northern Minnesota, of about $3.50 per cord and the present rate of growth of swamp forests of only one-tenth of a cord per acre per year, the present annual gross returns would be about 35 cents per acre even under management. If the yield through drainage could be increased to half a cord per acre per year, or say 30 cubic feet above the present yield of 10 cubic feet, the gross money returns per acre per year could be increased $1.05. Such an increase in revenue should pay off the investment in drainage, say $5, in about 5 years.

Still, the drainage of swamps for forest production in this country is in an experimental stage. I am not very optimistic that under the present economic status of forestry in those remote northern portions, it will become a common practice very soon. Eventually, however, when our forests are put under real forest management, I believe it will be considered an essential cultural operation in the swamps, as it is now considered in northern Europe. If only one-third of the total area of swamp forests could be handled in such a way and the yield only trebled, it would amount to almost trebling the area of some 3,000,000 acres of forest lands, supporting species which are of high commercial value. Whenever such cultural practice becomes economically feasible, the private timber owners should be able to carry it out on their own initiative and at their own expense, as it is done in Sweden.

First of all, of course, such cultural practice will probably be adopted on public forests, National and State, which include within their boundaries large areas of swamp forests.

While this treatment of the swamps for forest production may not come yet for a number of years, we feel that the Experiment Station must secure the facts and costs upon which such practice may be based.

Pulp Industry Expanding in Finland

Jacob de Julin, president of the Finnish Cellulose Association, Helsingfors, Finland, who arrived in New York recently, and is studying conditions in the United States, is also the managing director of the Aktiebolaget Kaukas Fabrik, large manufacturers of wood products, such as sulphite and kraft pulp, lumber and spools, etc. Mr. De Julin is accompanied by John M. Gylphe, director of the A. Ahlström, Osakeyhtiö, Norrmark, Finland, one of the largest manufacturing concerns in Finland, producers of paper, pulp, lumber, etc.

Mr. De Julin states that the paper and pulp industry of Finland is making rapid strides forward. The majority of the mills, especially the sulphite mills, are comparatively new and modern in every respect, making it possible to produce a very high quality of chemical pulp, which is finding a ready market both in this country and Europe. As an indication of the progress made by the pulp industry in Finland since the inception of the Finnish Cellulose Association in 1918 the following figures may be of interest to the readers of your paper:

YEARLY PRODUCTION OF SULPHITE AND SULPHATE

	1918	1919	1920	1921	1922	1923	1924	1925	1926 anticipated
Sulphite:	19,944	69,001	121,555	140,039	204,499	238,153	260,271	302,790	325,000
Sulphate:	2,328	27,300	43,182	33,942	49,510	56,791	56,208	64,324	70,000
Total:	22,272	96,301	164,737	173,981	254,009	294,944	316,479	367,114	395,000

The export of chemical pulp to the United States has been steadily on the increase since the first shipments were dispatched in 1919 and it is anticipated that during the next few years the export to this country will continue to show a gradual but substantial increase.

I. P. Has 19,409 Square Miles of Woodlands

Total woodlands owned and leased by International Paper Company in Canada and the United States now total 19,409 square miles, an area greater in size than Massachusetts, Connecticut, Rhode Island and Long Island combined.

Raw material from these reserves was used to feed 40 paper machines which the company operated in 1925 for the manufacture of news print. The great size and output of these machines is demonstrated by their total production of 353,880 tons of news print last year, an average of 8,847 tons for each machine.

During the first half of 1926, five additional machines came into production, on news print, making 45 in all, while four more machines, the largest in the world, are now under construction at the company's new Gatineau mill and will come into production early next year.

Use of Glue in Coated Paper*

By G. K. Hamill, Research Associate; V. H. Gottschalk, Research Associate; and G. W. Bicking, Paper Maker, Bureau of Standards

The results of the extended research on coated paper by the Bureau of Standards, in cooperation with the National Association of Glue Manufacturers, have been published in a pamphlet which will be of special interest to manufacturers of coated paper.

Three different brands of imported clay, which varied somewhat in color and plasticity, as well as mixtures of clay with satin white and blanc fixe, were used in the investigation with a number of glues representing high, medium and low grades as determined by the test methods. For comparison parallel coating runs were made using a good grade of French casein obtained from a commercial coating mill.

Laboratory Studies of Glues Including the Test Methods Employed

Prior to the larger scale work, involving the use of the Bureau's semi-commercial coating equipment, a thorough laboratory study was made to determine the suitability for coating purposes of the eight lots of glue obtained from manufacturers for this investigation. Test data as ordinarily used in describing glues were first obtained. These included the following items: Stock origin, form, moisture, ash, jell strength, viscosity, grease content, acidity, and observed odor. In addition, there were considered those factors which are of importance to the paper coater—the relation between adhesiveness and clay-suspending power, the effects of color on the finished coated paper, and the reactions with hardening, softening, and waterproofing agents. The effects of the acidity on the degree of deflocculation of the mineral portion of coating mixtures were also considered.

(a) STANDARD DATA.—Information regarding the type of stock used in manufacturing the respective glues was obtained from the manufacturers.

The moisture was obtained by heating a weighed sample at 105 degrees C., until constant weight was obtained. The dried samples were then incinerated in porcelain crucibles to find the ash content.

The jell strength and viscosity were measured by the approved methods of the National Association of Glue Manufacturers.[1]

(b) GREASE CONTENT.—A comparison of the grease content of the different lots of glues was obtained by the "fisheyes" method; that is, by taking the average of five counts of the number of "fisheyes" in 5 square inches of the coating obtained by painting on a sized paper a 25 per cent glue solution to which 2 ml. of a concentrated magenta solution had been added.[2] This method is not quantitative but serves for comparative purposes or to eliminate excessively greasy glues. It should be noted that by this means there is indicated the presence of free grease, which is objctionable in coating practice because of its tendency to "spot" on coated surfaces, and little or no indication is given of the presence of combined grease or soap. The count of "fisheyes" is not quite as satisfactory with bone glues as with those made from hide stock.

In the laboratory study there were noticeable variations between the results of the fisheye count and those of the Kissling extraction method[3] commonly used in glue analysis. This method specifies a rather long period of heating with hydrochloric acid and relatively high concentrations of the acid used. These conditions favor decomposition of any soaps present to their respective fatty acids, and in the extraction such material is added to the free grease removed from the sample. The "grease" obtained by the Kissling method was found to be completely saponifiable. It could therefore not contain decomposition products of the glue, and the larger amounts found as compared with the indications from the fisheye count must have been due to the splitting up of soaps by the acid.

The presence of soaps in the samples was checked by extracting a dried powdered glue with anhydrous petroleum ether until the relatively small amount of free grease was removed.[4] The residue from the ether extraction was then extracted with alcohol, and a small amount of soap was obtained.

(c) EFFECT OF COLOR OF ADHESIVE ON THAT OF COATED PAPER.—Hand-brushed samples of coated paper were prepared to determine the effects of the various colors of different glues and those of tinting agents when used with glues. The samples were air dried and, without being calendered, color comparisons were made with the Pfund colorimeter.[5] The same clay was used for all the coating mixtures, and the coatings were applied as uniformly as possible. In all cases the weight of the coating was sufficient to minimize any variations in the coating stock. For comparison, similar samples were prepared, using casein, starch, and gum tragacanth as adhesives.

(d) ADHESIVENESS AND CLAY SUSPENDING POWER.—Small amounts of coating mixtures were prepared and subjected to the sealing wax pick test. In this way comparisons were made between the adhesive qualities of different lots of glue. The relative clay-suspending powers were graded by comparing the amounts of mineral matter which settled out from these coating mixtures in a given length of time. Cylinders were filled to equal depths with the different coating mixtures, and the volume of the respective precipitates noted at suitable time intervals.

(e) WATER RESISTANCE.—The effects of a considerable number of glue-hardening agents were studied to check their influence on improving the water resistance of glue-bound coated paper. Among these materials were the formate, acetate, and sulphate of aluminum, chrome alum, sodium bichromate, and formaldehyde. Preliminary studies were made by forming films from glue solutions to which the respective hardening agents had been added. Later work included different methods of incorporating such materials in the finished coated paper and observations of their effects on coating mixtures.

(f) SOFTENING AGENTS.—The effect of materials commonly used for softening glue—that is, for lowering its viscosity and setting point, such as glycerin—was studied with films of glue and through the preparation of hand-brushed coated paper samples. These observations included consideration of glues to which hardening agents had been added as well as the normal glues. Materials, such as soaps, wax emulsions, and "vegetol," used in commercial coating practice were likewise tested.

(g) ACIDITY.—The acidity determinations were made by titration of a 1 per cent glue solution with tenth-normal sodium hydroxide solution, using phenolphthalein indicator. As this indicator changes color only when the solution has become distinctly alkaline (at 8.0 pH) the acidities as thus determined are too high; an attempt to substitute brom-thymol blue for phenol-

* Abstract of Technologic Papers of the Bureau of Standards, No. 323, U. S. Department of Commerce; 15 cents from the Superintendent of Documents, Government Printing Office, Washington, D. C.

[1] Standard methods of glue testing, Ind. & Eng. Chem., 16, 310-315, March, 1924.

[2] Teesdale-Bezeau, Modern Glues and Glue Handling, Chapter V, Glue Testing, 28, 33, 34.

[3] R. Kissling, Determination of grease in glue, Chemiker-Ztg., 11, 691, 719; also in Allen's Commercial Organic Analysis, 4th ed., 1913, 8, 606.

[4] R. H. Bogue, The Chemistry and Technology of Gelatin and Glue (1922), 455.

[5] A Measure of the Color Characteristics of White Papers. B. S. Tech. Paper No. 244, R. E. Lofton; 1923.

TECHNICAL SECTION, PAGE 160

phthalein failed because of the lack of a sharply distinguishable end point under the conditions of titration.

The hydrogen ion concentrations were determined colorimetrically.[6] The pH values show smaller hydrogen ion concentrations than would correspond to the titration values even at complete dissociation if the acid were strong and with a correction for the high results obtained with phenolphthalein. This indicates that much of the total acidity determined by titration is weak acid, probably of the type of the amino acids formed by hydrolysis during the glue-manufacturing processes, and hence is little dissociated. Laboratory studies were made of the effects of the degree of acidity of the different glues on the deflocculation of the mineral matter in preparing coating mixtures. The results of the additions of small amounts of different alkalies, calculated to neutralize the acid present in the different glues, on the degree of deflocculation were noted through study of the particle size of the mineral on coated sheets. At the same time any changes in the clay-suspending power of the glues were observed.

Following the interpretation of the tests given and the effect of treating the glue with various materials, the optimum conditions for the preparation of cooking mixtures are indicated with a description of the coating technique that was used.

The discussion of the results is based on laboratory runs made on the Bureau equipment and also on commercial test runs made at a commercial coating plant followed by printing tests on the coated paper by the Government Printing Office as well as two commercial printing plants.

Discussion of Results

1. Comparison Between Casein and Glue for Coating Purposes

The two reasons generally cited for the preference of casein above glue at the present time are the factors of price and waterproofness.

(a) Price.—The price question is rather an open one, for when the cost of casein solvents is taken into consideration, the influence of the type of stock coated and the weight of coat upon the amount of adhesive required, the choice of glue, the method of preparing casein or the relative spreading or covering powers of the particular casein and glue compared, may influence the cost of the finished paper more than variations in the market price of the adhesives. It may be noted that the reason given for the recent change in French coating procedure from casein to glue was the lower cost of glue.[7]

In this connection it should be noted that the frequently observed statement that five parts of glue are required to replace four parts of casein in coating formulas is extremely misleading, as it ignores the fact that glue, unlike casein, is sold in a number of well-recognized and sharply differentiated grades. Experiments have shown that the required proportion of glue to mineral matter as used in coating mixtures varies almost inversely as the grade of the glue. For example, as much as 20 per cent (based on the weight of clay) of a low-grade bone glue (jelly strength, 120 g; viscosity, 39 millipoises) was required to give a good pick test, and as little as 8 per cent of a high-grade hide glue (jelly strength, 257 g; viscosity, 79.3 millipoises) was sufficient for a clay coating that stood the sealing wax picking test as well as do commercial casein-coated papers. Similar experiments with a number of glues give the figures, 150 g jelly strength and 50 millipoises viscosity, representing a medium grade for a glue that is about equivalent to casein in binding power. In other words, a glue of this grade could be substituted pound for pound in place of casein in a coating formula. It should be noted that the adhesive power of casein may be influenced markedly by the method of "cutting" it; that is, by the kind and amounts of alkalies employed to dissolve it as well as by the time and temperature factors of the solution process.

(b) Water Resistance.—The question of damp proofness is to some extent also open. There is little doubt but that an ordinary glue-bound coated paper is less water resistant than an ordinary casein-bound coated paper, even though casein-bound paper as ordinarily made is not really waterproof. Yet in investigating the claim that glue-bound paper tends to stick together experiments showed that it is difficult to find conditions under which properly made glue-bound paper would become sticky enough to adhere when two sheets are pressed together. In one test, sheets of glue-bound coated paper were exposed to the steam rising from the dryer rolls of the experimental paper machine, then rapidly placed with coated surfaces together between heated aluminum plates and pressed for one-half hour. At the end of this time when the plates were removed the sheets of paper were easily separated without injury to the coated surfaces.

The insistence on a high degree of waterproofness in the coating of the paper is difficult to understand, inasmuch as, except in high-grade lithography and possibly in the offset processes, moisture has but little effect in printing. Coated paper finds its greatest use in ordinary printing and half-tone illustrating work, such as enters into magazine, book, catalogue, or advertising lines, and these processes and products do not require extraordinary damp proofness. Similarly it would appear that where it is desirable to increase the damp proofness of glue-bound coated papers, this may be accomplished by the use of glue-hardening agents. By study of the local conditions prevailing, it should be possible to apply such materials to individual problems. Among coated-paper manufacturers interviewed, the general idea is expressed that since the waterproofness of casein may be obtained without extra cost, it is cheap insurance against possible printing trouble. It seems reasonable to expect that with a price differential favoring glue, there would follow a trend of coating practice toward more strict segregation of the products for special uses, such as obtains in European mills where the use of glue is quite universal. Such a condition would call for a better coordination of effort and more successful cooperation between the paper coater, the ink manufacturer, and the printer than is now the case in this country. It may be noted that through the addition of chrome alum the setting and melting points of the glue are raised, which may be of significance in facilitating the drying process.

(c) Other Factors.—The reputed variations in acidity, grease content, odor, color, etc., are matters of specifications and are so treated in later sections of this report.

Factors favorable to the use of glue in paper coating are the obtaining of a higher finish with glue-bound than with casein-bound papers, as in the manufacture of glazed papers; the wider range of colors available for use with neutral glues as compared with alkaline casein; the avoiding of troublesome side reactions by using glue with satin white; and the influence of a higher degree of elasticity as obtained through the use of high-grade hide glues as adhesives in papers subjected to embossing and similar processes.

Specifications for Coaters' Glue

The results of this investigation have indicated that glues of widely different types may be used for coating purposes. It has therefore appeared that from the viewpoint of the individual coater it is essential, if uniformly satisfactory results are to be obtained, that the glue used be of known quality and properties. The grade as determined by the official jelly-strength and viscosity tests, is of primary importance. This is followed by the factor of clay-suspending power and considerations of acidity, grease content, odor, and color.

The grade of glue to be used must be determined from considerations of price, product requirement, and local coating conditions. When the desired grade has been fixed upon, there should be no difficulty in duplicating the material, because the glue industry is already organized on a grade basis.

Again, in the matter of clay-suspending power, the local condition of the choice of pigment has interfered with the development of a standard method of testing. It has appeared during

[6] The Determination of Hydrogen Ions, W. M. Clark (1920), p. 307.
[7] Notes on current paper-coating practice, by Elie Caylers, in Le Papier, July, 1925, p. 777.

this investigation that the clay-suspending power of different glues is influenced by the methods of manufacture and that when the grade of glue is agreed upon a choice between two glues is readily made by making up for comparison small amounts of a standard coating mixture, using the mill formula with each of the glues under consideration, and examining these mixtures for the rates of settling at suitable time intervals.

As to the incidental properties of acidity, grease content, foaming tendency, odor, and color, these were found to have no standards for coating purposes.

While glue is most water resistant when very slightly acid, for coating with alkaline pigments, such as satin white, it has been found that neutral glues do not tend to react with the pigments and are therefore more easily handled. Inasmuch as it is the free hydrogen-ion concentration rather than the total amount of acid that determines the behavior of glue solutions, it is felt that the pH determination is of value in specifying glues for coating work, as nearly neutral glues only slightly acid appear to introduce the fewest complications in the preparation of color mixes. Since glue makers have generally adopted some method of determining hydrogen-ion concentrations in the control of their manufacturing processes, this measurement may be specified for limiting acidity.

In consideration of the factors of grease content and foaming tendency, it should be noted that these are to some extent interrelated characteristics. Thus, with a given glue, reduction of the grease content is generally accompanied by an increased tendency to foam. Glues in which these factors are at the optimum balance are offered in most of the commercial grades.

The question of odor is largely determined by the stock and manufacturing conditions. In any grade, glues free of objectionable odor are readily obtainable. Although the color of various glues varies considerably, when coatings are made with different glues the finished papers seldom show a difference visible to the eye. Where desired, especially light-colored glues may generally be procured.

Summary and Conclusions

Paper has been coated on the coating equipment of the Bureau of Standards experimental paper mill, using glues of different grades as adhesives and using casein for comparison, with the different types of minerals, clay, satin white, and blanc fixe. The coated paper has been calendered and subjected to printing tests at the Government Printing Office. A demonstration of the use of glue in coated paper has been given to representatives of glue manufacturers and of the coated-paper industry, at which there were employed formulas which had been evolved to produce coated papers of satisfactory printing qualities.

The results of laboratory studies of the individual factors involved, of upward of 100 experimental coatings on semicommercial equipment, and of the coating of 5 lots of paper on commercial equipment point to the following general conclusions:

1. The proportion of glue required in coating mixtures varies almost inversely with the grade of the glue chosen, and the amount of the better-grade glues required may be less than that of casein.

2. The use of glue introduces no new difficulties in the preparation and application of coating mixtures containing either neutral minerals, such as clay and blanc fixe, or alkaline substances, such as satin white.

3. With proper selection of the glue used and adaptations to local conditions and product requirements the use of glue requires little change in equipment and involves little change in operating technic from procedure with casein.

4. The various types of glue available permit considerable latitude in choice within which local conditions may be met.

5. Variations in the other materials employed and in coating procedures influence largely the proportion of adhesive required to produce coated papers of satisfactory printing qualities.

6. The use of ordinary glue-bound coated paper offers no new difficulties to the printer and engraver, at least as regards printing processes other than those lithographic and possibly offset processes where a high degree of water resistance is required.

7. The need for an extraordinary degree of waterproofness and of water resistance in coated paper for other than some lithographic and offset work is questionable.

8. Uniformity in glue for coating processes may be attained by drawing specifications to meet local and product requirements.

Bibliography

1. Coated Paper

Belle, G., Coated paper, La Papeterie, 46, No. 8, April 25, et seq. Paper, 35, No. 11, pp. 445-449, January 1, 1925.

Bentzen, Th., Bartyes coated papers. Technical Association of the Pulp and Paper Industry Papers, Series 8, No. 1, pp. 49-51, June, 1925. Paper Trade J., 80, No. 6, pp. 199-202, February 5, 1925.

Bentzen, Th., Baryta coating for different photographic emulsions, Paper Trade J., 80, No. 21, May 25, 1925.

Bromley, H. A., Manufacture and technical examination of coated papers and their constituents, Paper Maker and British Paper Trade J., 47, pp. 717-721, 1913.

Bromley, H. A., Paper and its constituents, Chapter V, Coated paper. Spon, London; 1920.

Caylus, Elie, The Manufacture of coated printing papers, Le Papier, 28, pp. 777-782, July, 1925. Paper Industry, 7, No. 8, p. 1270, November, 1925.

China clay for paper making. Paper Trade J., 69, No. 13, p. 28, September 25, 1919.

Clark, Norman, Process of coloring coated paper, The Paper Mill, 48, No. 32, pp. 46-48, August 9, 1924.

Clays and talcs used in the manufacture of paper, Paper Maker, 46, No. 2, p. 251, August, 1913; 49, No. 4, p. 433, April, 1915; Paper Trade J., 57, No. 3, p. 56, August 17, 1913.

Coating and tub sizing, La Papeterie, 1920, p. 290, April 10; p. 350, April 25, 1920.

Coated paper, Science et Industrie, 7, No. 100, pp. 119-122, January 31, 1923.

Demonstration of the use of glue in coated paper, The Paper Mill, 49, No. 43, p. 16, October 24, 1925.

Examination of china clay, Paper Maker, p. 78, January 1, 1913.

Foulis, R. B., How coated papers are made, Paper, 21, No. 22, p. 14, February 6, 1918.

Gottschalk, V. H., The use of glue for coated paper, Paper Trade J., 79, No. 20, p. 46, November 13, 1924.

Griffin, R. C., Technical methods of analysis, pp. 316-317, McGraw-Hill Book Co. (Inc.), New York; 1921.

Gwinn, Charles S., The testing of paper clays, Trans. Am. Ceram. Soc., 14, pp. 571-574; 1912; Paper, 11, No. 2, p. 17, March 26, 1913; Pulp and Paper Mag. of Canada, 11, No. 10, p. 358, May 15, 1913.

Hamill, G. K., Coated paper, The Paper Mill, 49, No. 50, p. 18, December 12, 1925.

Lowe, D. V., Notes on china clay, Tech. Assoc. of the Pulp and Paper Ind. Papers, Series 8, No. 1, p. 52, June, 1925; Paper Trade J., 80, No. 6, pp. 203-205, February 5, 1925.

The manufacture of pulp and paper, 5, section 4, Coated papers, The McGraw-Hill Book Co. (Inc.), New York; 1925.

The manufacture of surface-coated paper, Paper, 7, No. 3, p. 15, April 3, 1912.

Schenck, Wm. F., Manufacture of coated paper, Paper, 28, No. 18, p. 13, July 6, 1921.

Sutermeister, E., Troubles encountered in making coated papers, Paper, 24, No. 7, p. 15, April 23, 1919.

Sutermeister, E., The chemistry of pulp and paper making, Chapter XII, p. 325, John Wiley & Sons, New York; 1920.

Sutermeister, E., Testing antifrothing materials for use in coated paper, Paper Ind., 7, No. 5, August, 1925.

Verrill and Sutermeister, E., Frothing and pinholes in coated papers, Paper Ind., 7, No. 3, p. 393, June, 1925.

Voraberger, Alex. R., Clays used for coating and loading paper, Paper, 13, No. 13, pp. 15-18, December 10, 1913; Paper Maker, 47, No. 1, pp. 59-62, January, 1914.

2. Glue and Glue Testing

Alexander, Jerome, Glue and gelatine, The Chem. Catalogue, New York; 1923.

Bogue, R. H., The chemistry and technology of gelatin and glue, McGraw-Hill Book Co. (Inc.); 1922.

Standard methods of determining jell strength and viscosity of glue and gelatin, Ind. and Eng. Chem., 16, No. 3, pp. 310-315, March, 1924.

Teesdale-Bezeau, Modern glues and glue handling, Periodical Publ. Co., Grand Rapids, Mich.; 1922.

Thiele, Ludwig, Die Fabrikation von Leim und Gelatine, Max Jänecke, Leipzig; 1922.

Changes in Timken Roller Bearing Co.

Yale D. Hills has been appointed branch manager of the Seattle branch of the Timken Roller Bearing Service and Sales Company. Mr. Hills was formerly branch manager of the Portland branch. When this branch office was closed he came to the main office at Canton, Ohio, where he has been located until his present appointment.

R. H. Cross, who held the position of Seattle branch manager prior to Mr. Hills, has been made assistant to G. C. McMullen, district manager of sales, Industrial Division. Mr. Cross will continue to maintain offices at Seattle.

E. N. Beisheim, formerly of the Bock Bearing Company, Toledo, Ohio, has been appointed assistant to the general manager of the Timken Roller Bearing Service and Sales Company, Canton, Ohio.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Pulp Testing

Roe's Chlorine Number and Relation to Per Cent Lignin Determined by a Modified Halse Method. G. P. Genberg and T. Jonsson. Paper Trade J. 82, No. 2, 50-52 (June 2, 1926). An apparatus is described for the application of Roe's chlorine absorption test (Paper Trade J. 79, No. 16, Oct. 9, 1924 as a routine test in mill control, and the technique is described in detail. Comparative chlorine absorption determinations and lignin determinations by a slight modification of Halse's method (Paper Trade J. 80, No. 16, 49-50 Apr. 16 1925 showed that Roe's chlorine absorption number can be used for a direct determination of lignin even for pulps of very different lignin contents, and that for accuracy and simplicity it is unsurpassed by any other method used at present for determining lignin in sulphite pulp.—A. P.—C.

Method and Apparatus for Testing the Fineness of Paper Pulp. D. E. Reid assignor to Eastman Kodak Co. U. S. pat. 1,580,166, April 13, 1926. The test is carried out by placing a measured quantity of stock, diluted down to a suitable consistency, in a tank the bottom of which is a screen-plate, and the residue is dried and weighed. The screen-plate is removable, so that it can be easily changed according to the nature and quality of the stock. In order to obtain rapid screening the water is discharged into a chamber with a flexible bottom, which is rapidly vibrated up and down, causing a suction effect which draws the pulp through the screen. Instead of using different screen plates, the same plate can be used in all tests, and the amount of stock which passes through in a fixed time gives a measure of the degree of preparation or fineness of the fibers. The instrument is useful for testing the stock at intervals during beating or after jordaning.—A.P.—C.

Electric Pulp-Drying Oven Designed at the French School of Paper Making. M. Aribert and M. Fallot. Paper Trade J. 82, No. 22, 52 (June 31, 1926). The oven is made to hold fifty or more samples in perforated aluminum baskets. The balance pan is inside the oven, and the samples can be pushed or pulled off the pan without having to open the oven.—A.P.—C.

Dyes and Dyeing

Paper Coloring. Some Points of View Regarding the Dyeing of Paper Fibers with Coal Tar Dyes in the Beater. Ivar Ekholm. Paper Trade J. 82, No. 19, 56 (May 13, 1926). Brief review of the properties of basic, acid and direct dyes from the standpoint of their affinity for papermaking fibers and their fastness.—A. P.-C.

Improving the Fastness to Light of Dyes when Applied on Paper. A. Beyer. Papier 29, 307-319 (Mar. 1926); Paper Trade J. 82, No. 21, 53-60 (May 27, 1926). A detailed discussion of the causes of the sensitiveness of dyes to light and of the various methods available for increasing their fastness. The reactions involved in the degradation of the shades and the methods of preventing them are reviewed, with examples of results actually obtained and indications as to possible lines of further research as applied to paper coloring.—A. P.-C.

Preparation of Slides for Michrochemical Paper Fiber Analysis by the Estimation Method. C. G. Bright. Pulp & Paper 24, 615-616 (May 27, 1926). The preparation of the slides is described in detail, with numerous hints to aid in overcoming troubles which may be encountered.—A. P.-C.

The Bright Stain. C. G. Bright. Pulp & Paper 24, 645-646 (June 3, 1926). A revision of the description of the British stain for distinguishing between bleached and unbleached pulp, and of the technique of its application, with hints on the interpretation of the results.—A. P.-C.

Standard Methods for Paper Testing. Paper Ind. 8, 264-266 (May 1926); Pulp & Paper 24, 572-575 (May 20, 1926). Methods proposed by the Technical Association of the Pulp and Paper Industry for sampling paper, determining tensile breaking strength, bursting strength, casein coating, resin, paraffin, sulphur and fiber composition are described.—A. P.—C.

Theories of Dyeing. S. H. Jenkins. Pulp & Paper 24, 646-647 (June 3, 1926). Outline of the chemical, mechanical, colloidal and electrical theories of dyeing. The complexity of dyeing phenomena indicates that none of these theories can alone adequately explain the numerous facts that are known in connection with dyeing. Experiment has shown that chemical, physical and physico-chemical action may take place, and therefore it is only by a combination of the various theories that a satisfactory explanation can be obtained.—A. P.-C.

Effect of Lighting on the Matching of Colors. Herman Weisz. Papier 29, 539-543 (May 1926). After discussing the reasons why shades which appear the same when viewed under one source light are different when viewed under another source of light, the author describes the "Lumina" so-called "daylight eye glasses" and discusses their advantages over the now well known "daylight lamps."—A. P.-C.

Coating Materials and Fillers

Recovery of Paraffin Coated Waste Papers. J. G. L. Caulfield and P DeC. Bray. Paper Trade J. 82, No. 20, 48 (May 20, 1926). By steaming paraffin coated paper trimmings at about 90° C. for a few hours all but a slight trace of the paraffin is removed, and the stock can be reworked and used over again.—A. P.-C.

Improving the Retention of Fillers. K. Sveen.. Fr. pat. 600,932, July 20, 1925. Retention of an unusually large proportion of fillers in paper is facilitated by the addition of auxiliary substances which form colloids with the mordants, such as soap solutions especially of the fatty acids, rubber emulsions, gelatin, glue, casein and solutions of inorganic substances such as alkalies, ammonia, soluble silicates, lime or calcium salts. China clay "mordanted" with aluminum sulphate may be used as filler. The process is also suitable for the treatment of paper machine back waters for the recovery of both the fiber and filler.—A. P.-C.

Miscellaneous

Protection of Paper Against Its Enemies. Am. Matagrin. Papeterie 46, 646-650 (July 25, 1924); 47,562-566 (June 25), 614-618 (July 10), 710-714 (Aug. 10), 750-754 (Aug. 25), 997-1000 (Nov. 10), 1138-1145 (Dec. 25, 1925); 48, 25-29 (Jan. 10, 1926). Discussion of the ravages caused by rodents, insects, molds, fungi and bacteria, of the deterioration due to moisture and chemical agents, and of the methods of preventing these ravages and deterioration.—A. P.-C.

Frictional Electricity in Paper. M. Speter. Papierfabr. 24, 119-120 (Feb. 21, 1926). The electric charge assumed by a sheet of paper when rubbed with various materials is investigated. Strips of paper which have just been dried always become negatively charged when rubbed with the hand, and positively charged when rubbed with glazed paper.—J. L. P.

Cost Relations in the Paper Industry. Mirus. Wochbl. Papierfabr. 57, 460-465 (Apr. 24, 1926); Papierfabr. 24, 254-257 (Apr. 25, 1926). A general discussion.—J. L. P.

Perforating and Reinforcing Paper Sheets. A. Balma and A. Capoduri. Eng. pat. 244,422. The reinforcing material is fed from a supply roll beneath a punch to a second roller and brought into contact with the paper during the operation of the punch so that perforation and reinforcement are performed simultaneously.—A. P.-C.

Drier Felt for Paper and Board Machines. E. Van Asten. U. S. pat. 1,574,592, Feb. 23, 1926. Driers felts comprise an inner strengthening core of vegetable textile fiber and an outer layer of asbestos.—A. P.-C.

The Art of Printing and Its Affiliation With Paper Making. W. S. Shantz. Paper Mill 49, No. 19, 10, 12, 38 (May 8, 1926). Historical notes on the development of printing.—A. P.-C.

Sewer Waste and White Water Elimination. G. D. Bearce. Pulp and Paper 24, 457-459 (Apr. 22, 1926). Discussion of the importance of proper re-use and treatment of white water for the reduction or elimination of loss of good stock, with concrete examples showing the great savings effected in several instances.—A. P.-C.

Old Paper Mills of the Rhine Province. F. von Hoessle. Wochbl. Papierfabr. 57, 473-478. (Apr. 24, 1926). Historical descriptions of the following old German paper mills in the Rhine province: Dillinger, Schwalbach and the mills in Waldrach.—J. L. P.

Expansible Cylinder Mold for Dandy and Other Rolls. R. Richardson and J. F. Key. Eng. pat. 246,313. The rods which support the wire clothing of the cylinder mold are placed in slots in the ends of the mold, and each end of every rod rests on the small arm of a bell crank or other armed lever, pivoted on the frame. The ends of the long arms of the bell cranks fit into depressions in a wheel concentric with the cylinder mold; and rotation of the wheel in one direction or the other causes the bell cranks to pivot, thereby displacing all the rods to the same extent either towards or away from the center, and expanding or contracting the effective diameter of the cylinder mold.—A.P.-C.

Device for Replacing or Supplementing the Action of Suction Boxes. St. Anne's Board Mill Co. Eng. pat. 246,968. Beneath the portion of the machine wire where suction is to take place is the upper run of a band of rubber with V-shaped grooves. On each side of the upper run of this rubber band are the mouths of passages leading to the suction device, the side of the band bearing against the flanges of these mouths. The flanges are such that as the band travels along there will be communication between the suction devices and those channels and superposed portions of the wire which successively come into coincidence with the mouths of the passages leading to the suction devices.—A.P.-C.

An Improved Doctor for Calenders and Driers. P. D. Switzer. Paper Mill 49, No. 18, 12, 16 (May 1, 1926). Description of the Vickery doctor and of its merits.—A.P.-C.

Doctor for Paper Machine Rolls. J. White assignor to Vickerys, Ltd. U. S. pat. 1,566,358, Dec. 22, 1925. The doctor blade is divided into a large number of fingers, each of which is pressed individually against the surface of the roll by means of springs, of fluid under pressure, or of their own resiliency.—A.P.-C.

Machine for Making Creped Paper. J. M. Cathcart. U. S. pat. 1,568,363, Jan. 5, 1926. The first press felt picks the sheet off the wire by passing between the suction couch and the top couch rolls, and the second press felt picks the sheet off the first press felt by passing through the first press. The paper is creped on the second press, and a suitable conveyor is provided to carry the creped paper from the second press to the drier.—A.P.-C.

Putting on a Paper Machine Wire. V. Bouyer. Papier 28, 1337-1342 (Dec., 1925). A description of the proper method of putting a wire on a paper machine, and of the precautions which must be taken to prevent accidents and ensure maximum life to the wire.—A.P.-C.

TECHNICAL SECTION, PAGE 164

Method of Delivering Stock on to the Paper Machine Wire. A. J. Lewthwaite. U. S. pat. 1,563,095, Nov. 24, 1925. Air is blown on to the surface of the stock as it emerges from under the last slice, the air being blown at the same speed and in the same direction as the stock, and being confined by a plate parallel to the wire. The suction boxes are placed between the apron and the first table roll, and the plate confining the air over the wire extends to the last suction box.—A.P.-C.

Couch-Roll Jacket. O. L. Russel assignor to F. C. Huyck & Sons. U. S. pat. 1,559,785, Nov. 3, 1925. The patent covers an interwoven multiple-ply felted jacket for couch or similar rolls, comprising one or more inner plies of comparatively coarse-fibered wool and one or more outer plies of comparatively coarse-fibered wool and one or more outer plies of comparatively fine-fibered wool.—A.P.-C.

Sectional Electric Drive for Paper Machines. R. N. Norris. Paper Ind. 8, 85-89 (April, 1926). Description of the mechanical differential control used in the Harland "Interlock" sectional electric drive, with a discussion of the drive of the constant-speed end of the paper machine and the general advantages of electrical sectional drive for paper machines. Some figures are given on the power consumption of several classes of paper mills.—A.P.-C.

Feeding Stock on to the Paper Machine Wire. D. C. Bucking. Fr. pat. 601,129, July 21, 1925. In order to obtain as uniform felting as possible in all directions, the stock is agitated immediately before and as it is being fed on to the wire. It is preferable to do this by producing a large number of relatively small eddies. The method described consists in feeding the stock vertically upwards through a large number of relatively small tubes just back of the apron, each tube being provided with a screw or spiral to impart a rotary motion to the stock as it is discharged on to the table of the machine.—A.P.-C.

Doing Away With the Deckle Straps. Paper Ind. 7, 1927-1929 (March, 1926). Brief outline of the steps which brought about the elimination of the deckle straps, with a description of the Gustafson and Heisel devices replacing the straps and a brief discussion of their advantages and disadvantages.—A.P.-C.

The Manufacture of Rubber Covers of the Press Rolls for Paper Making. F. A. Todd. Pulp and Paper International No. 111-116 (Feb., 1926). Discussion of the properties of rubber from the standpoint of press roll covers, and description of the process of manufacture of the latter.—A.P.-C.

Paper Machine Felt. E. von Asten. Eng. pat. 245,646. This is an improved felt composed of threads of cotton, wool, paper yarn or linen covered with a sheath of densely woven asbestos, the quality of which is brittle and in which the fibers lie pell mell. These felts are not affected by the heat of the drying cylinders, they readily absorb water from the paper web, and vapors easily pass through. Moreover, they remain soft and pliable and run smoothly.—A.P.-C.

An Analysis of Press Felt Performance in a Modern News Mill. E. A. Rees. Pulp and Paper International No. 103-10 (Feb., 1926). The article attempts to present in simple graphic form a more or less complete practical story of the water removal happenings of a modern news machine. Water removal efficiency of a felt is defined as the amount of water removed by the felt in proportion to that available for it to remove, i.e., the question of "opportunity" is a very important one. The results (which were obtained in the course of actual mill operations) are correlated, and from them a working outline is developed to serve as a practical guide in determining just how much emphasis should be placed on water removal and how much emphasis on life. Finally, the relation between water removal by the felt and at the driers is discussed to indicate how to obtain the exact balance between felt cost and steam cost (consistent with production) so that the lowest total cost of water removal will be obtained.—A.P.-C.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

Preparing A Budget*

Methods of Preparation and Control—Coordination With Proper Accounting Statements—Principles of Forecasting Discussed

By Alvin R. Jennings

While a large and cumbersome super-organization is not necessary or desirable to successfully install and administer a budget, it is well to outline within the organization a working plan which will be simple but effective—one which will clearly designate authority and define responsibility for results.

The chief corporate officer, whether he be president or chairman of the board of directors, is interested primarily in results, and the demands upon his time will not in all likelihood permit of his direct supervision of the budget. This duty he delegates to an assistant. Who this assistant shall be is a matter for each individual enterprise to determine. The main requisite is that he should be independent of, and not responsible to, operating department executives.

Chamber of Commerce Questionnaire

The Chamber of Commerce of the United States, in an effort to get a representative answer to a query as to who the chief budget officer should be, requested a reply to the following two questions from 24 representative firms. The questions asked were:

"1—Do you have a budget officer who reports to the chief executive and is independent of and not responsible to operating department executives? If so, what is his title and to whom does he report?

"2—What in general are the duties and powers of your budget officer?

A—In connection with the preparation of the budget.

B—In the supervision of operating results under the budget.

C—In executive action."

The two questions produced a variety of answers, which are summarized as follows:

"*** It will be noted that generally these companies do not employ an executive officer whose prime functions are the preparation of the budget and the supervision of the results secured under the budget. It seems to be rather common practice, however, to assign such duties in addition to others to executive officers such as a vice-president, assistant to the president, or general manager. In many cases the work of the preparation of the budget and of supervisory reports falls to the comptroller. He, usually, does not have any executive authority to correct an unfavorable showing."

For the purpose of this article it is assumed that the preparation and supervision of the budget is one of the duties of the assistant to the president.

The first function of the chief budget officer (hereinafter referred to as budget director will be to form a budget committee, the personnel of which will include the managers of the various departments somewhat as follows: Sales Manager, Production Manager, Treasurer or Comptroller, Purchasing Agent, General Manager.

It should be remembered that the purpose of the budget is not to eliminate executives but to aid them. Perhaps the members of the budget committee are unacquainted with forecasting principles as they apply to the industry as a whole. The problem is then one of education. The method of dovetailing purchases into production and production into sales, etc. should be explained. The fact that there is no mystery about budgeting should be impressed. The illusion that forecasting is a game in which "one man's guess is as good as another's" should be overcome and the executives brought to realize that forecasting is 90 per cent history and 10 per cent scientifically analyzed probability. As the staff become acquainted with the possibilities of budgeting, they will realize that it holds many advantages conducive not only to the efficient management of the business as a whole, but to their particular departments as well.

As soon as the idea of forecasting has been "sold" to the members of the committee, the question of the budgets required and the period which they will cover can be discussed. For the ordinary manufacturing business which converts its raw products into finished stock at least once a year, the logical forecast period will be the same as the accounting period; i. e., 12 months ending December 31, or the fiscal year, if the corporation has a fiscal-year closing.

The necessary yearly budgets are:

1—Sales forecast.

2—Production forecast.

3—Forecast of administrative and financial expenses.

In addition to the yearly forecasts, certain monthly estimates are necessary. These represent the mere breaking down into periods of the yearly figures and are prepared the first of each month. The required monthly estimates are: 1—Sales forecast, 2—Purchase forecast, 3—Treasurer's forecast.

The Yearly Budget

Any concern that prepares a profit and loss statement and balance sheet, has the skeleton of a forecast. The primary idea of forecasting is to present today a panorama of the condition of

* (*From the Pace Student.*)

the business 12 months hence reflected in the universal mirror of business—the balance sheet.

For the purpose of presenting the procedure to be followed in preparing the yearly budgets, the profit and loss statement illustrated (Form 1) has been keyed on the left-hand margin with figures which denote into which of the three yearly forecasts the items will be included.

Sales Forecast

The sales forecast, since it is the groundwork upon which the budget structure will be raised, is the logical beginning point.

The sales manager, who knows more about the selling function of the business than anyone else in the organization, will be asked to submit his forecast for the forthcoming year. He will be responsible for budgeting the items on the profit and loss statement before which the figure (1) appears in the margin. He should first direct his attention to the volume of sales he can reasonably expect to achieve, taking into consideration the ability of the factory to produce the required amount of goods, the demand of the buying public, national business conditions, and any radical changes in the policies of the organization.

Apparently, the sales trend is upward, the business having doubled (in units sold) in the past five years. From all indications, business conditions for the country as a whole, are figured to remain about the same. In view of the fact that the corporation has conducted an extensive advertising campaign in the closing months of the previous year, it is estimated that the business will increase about 10 per cent. Reasoning along these lines, the sales manager sets a figure which he is confident is neither too optimistic nor too conservative.

In addition to the forecast of the net sales, the sales manager is also responsible for budgeting the items of selling expense appearing on the profit and loss statement. He will therefore prepare a statement of the estimated cost of selling the volume of sales he has set. Here again past history as reflected by previous profit and loss statements will prove his greatest aid. If he has estimated his sales will increase 10 per cent., he must anticipate greater salesmen's commissions, etc.

The budget of the sales manager when prepared will be submitted to the director of the budget and the budget committee somewhat in the form of Form 2.

As mentioned previously, 90 percent of his estimate will be based on historical statistics presumably at his command. By historical statistics is not meant necessarily the record of the previous year's accomplishment alone, for that may have been an abnormal period. For the purpose of example, let us suppose the business has been in existence for ten years and has a fairly reliable and complete record of sales. Reviewing, we find that the sales were as follows:

Year	Quantities	Amount
1925	200,000 Units	$1,600,000
1924	175,000 Units	1,400,000
1923	135,000 Units	1,215,000
1922	150,000 Units	1,350,000
1921	100,000 Units	1,000,000

The budget committee will then convene to discuss the quota of sales. Particular regard must be given as to the ability of the factory to produce the required amount without expansion beyond the present capacity. If expansion requiring the outlay of a large amount of capital is necessary, the wise executive will think twice before approving the budget. Not infrequently is it better policy to forego present excessive profits if the boom is but temporary. The urge of greater profits and resulting overexpansion sent many promising businesses into discard during the business slump of 1921-1922. Better by far is a constant, reasonable, return on the present capital than a succession of fruitful years and lean years—lean years which may so dissipate the past earnings of the enterprise as to make insolvency inevitable.

Production Forecast

Provided the sales budget meets with general approval (or if

Form 1—PROFIT AND LOSS STATEMENT

X MANUFACTURING COMPANY
PROFIT AND LOSS STATEMENT
Year Ended December 31, 192..

Key No.					
(1)	Sales			$000	
	Deduct: Returned sales and allowances			000	
	Net sales				$000
(2)	Deduct: Cost of goods manufactured and sold				000
	Gross Profit				$000
(1)	Deduct: Selling expenses:				
	Payroll (exclusive of advertising):				
	Manager's Office	$000			
	Salesmen (salaries)	000			
	Salesmen (commissions)	000	$000		
	Advertising:				
	Payroll	$000			
	Stationery and Postage	000			
	Newspaper advertisements	000			
	Magazine advertisements	000	$000		
	Official's expense:				
	Entertaining	$000			
	Traveling	000	$000		
	Jobbers' convention expense		$000		
	Other expense:				
	Out freight	$000			
	Membership dues	000			
	Telegrams	000			
	Miscellaneous	000	000	000	
(3)	Deduct: General administrative expenses:				
	Office salaries		$000		
	Telegrams and telephone		000		
	Printing and stationery		000		
	Office supplies		000		
	Taxes		000		
	Insurance		000		
	Auditing		000		
	Reserve for depreciation:				
	Office equipment	000			
	Office building	000	$000	$000	
(3)	Add: Financial management income:				
	Interest on bank balances	$000			
	Interest on securities	000			
	Discount receivable	000	$000		
	Less:				
	Bad Debts reserved for	$000			
	Interest and discount payable	000	000	000	000
	Net Profit and Loss				$000

Form 2—SALES BUDGET

X MANUFACTURING CORPORATION
BUDGET OF SALES AND SELLING EXPENSES
Year Ending December 31, 1926

	1925 (Actual)	1926 (Budget)	Per Cent of Net Sales 100%
Net Sales (..... units)		Amount $000	
Selling expenses:			%
Payroll (exclusive of advertising):			
Manager's office	$000	$000	00
Salesmen (salaries)	000	000	00
Salesmen (commissions)	000	000	00
Total Payroll Expense	$000	$000	00
Advertising:			
Payroll	$000	$000	00
Stationery and postage	000	000	00
Newspaper advertisements	000	000	00
Magazine advertisements	000	000	00
Total Advertising Expense	$000	$000	00
Official's expense:			
Entertaining	$000	$000	00
Traveling	000	000	00
Total Officials' Expense	$000	$000	00
Jobbers' convention expense	$000	$000	00
Other expenses:			
Out freight	$000	$000	00
Membership dues	000	000	00
Telegrams	000	000	00
Miscellaneous	000	000	00
Total Other Expenses	$000	$000	00
Grand Total Selling Expenses	$000	$000	00

Approved.....Budget Director.
Approved..... President.

not, after revision) the production manager will be asked to provide his forecast of the cost of manufacturing the units. Obviously, the business whose accounting system includes a comprehensive cost system has an invaluable advantage in the preparation of this forecast. The lack of cost figures, however, does not preculde the possibility of preparing a production forecast, as a unit cost may be obtained in some instances by computation outside of the books.

Assuming that cost figures are available, the production manager will submit a forecast similar to that outlined in Form 3.

Form 3—PRODUCTION BUDGET FORECAST

PRODUCTION FORECAST

Maximum production at present capacity ..... units per month.
Required production to meet sales budget ..... units per month.

Items of Cost	Budgeted Cost per Unit 1926	Actual Cost per Unit 1925	Actual Cost per Unit 1924	Actual Cost per Unit 1923	Actual Cost per Unit 1922
Direct Labor:					
Dept. A	00	00	00	00	00
Dept. B	00	00	00	00	00
Etc.	00	00	00	00	00
Total	00	00	00	00	00
Material and supplies:					
Dept. A	00	00	00	00	00
Dept. B	00	00	00	00	00
Etc.	00	00	00	00	00
Total	00	00	00	00	00
Overhead:					
Payrolls:					
Planning & prod. mgrs. dept.	00	00	00	00	00
Engineering	00	00	00	00	00
Factory Superintendent	00	00	00	00	00
Stock Clerks	00	00	00	00	00
Janitors	00	00	00	00	00
Watchmen	00	00	00	00	00
General Maintenance	00	00	00	00	00
Power:					
Steam	00	00	00	00	00
Electricity	00	00	00	00	00
Gas	00	00	00	00	00
Air	00	00	00	00	00
Water	00	00	00	00	00
Administrative & Miscellaneous:					
Depreciation of equipment	00	00	00	00	00
Depreciation of buildings	00	00	00	00	00
Reserve for inventory adjustments	00	00	00	00	00
Insurance, fire	00	00	00	00	00
Insurance Liability	00	00	00	00	00
Etc.	00	00	00	00	00
Total Overhead	00	00	00	00	00
Total cost to make	00	00	00	00	00

In preparing his figures he must of course take into consideration the inventory on hand at the beginning of the year, in order to determine what he is required to produce.

His calculations will be as follows:—

	Units
Number of units estimated to be sold during year	000000
Add: Inventory required to be on hand at end of year	000000
Total	000000
Deduct: Inventory on hand at beginning of year	000000
Balance: To be produced during the current year	000000

One of the advantages of the budget which has been mentioned above in the list of advantages, is that the budget minimizes inventories. Inventories represent dormant capital until turned into cash, and meanwhile accumulate charges. An old adage says, "rolling stones gather no moss". Likewise, moving inventories gather no charges.

If it requires 30 days to produce enough units for one month's sales, an inventory equivalent to one month's sales should be ample to allow for fluctuation in any one month's sales and for tie-ups of equipment. What this margin should be may vary because of the seasonal nature of some businesses. In the cement business, for instance, the seasonal trend follows the building activity, the peak of the business being in the spring and fall, while the winter months are slow. In such cases, inventories must be accumulated during the slow periods to provide for the seasons when production cannot equal shipments.

By having the sales manager break down his anticipated sales into monthly periods and revising these as necessary, the production manager can so plan his output, as to equalize production and minimize inventories, not only of finished goods, but of raw materials as well.

Administration Expense Forecast

After consideration has been given to the production budget and it has been approved, there remains only the necessity of budgeting the administration and financial expenses to complete the three forecasts for the year. Who is to prepare this last budget is a matter which may vary to some degree. In some instances, the treasurer has control over administrative and financial expenditures; in others, the control is vested in the Secretary; and in still others there may be an office manager with this authority.

The proper officer, whoever he may be, will be asked to submit his forecast for the coming year of all of the items shown on Form 1 before which the figure (3) appears. He will of course, know the anticipated increase in sales and may be guided accordingly. His budget will be prepared substantially in the same form as that of the sales manager, which is illustrated by Form 2.

After this third and final yearly budget has been completed and approved, the three may be consolidated into a forecasted profit and loss statement for the coming year. The effort expended in preparing the budgets outlined above will prove to be so much wasted time unless they are closely adhered to. It should be remembered that the advantages of the budget accrue in direct proportion to the rigidity exercised in obtaining the standard set. "Budget your profits by your budget", is a fitting motto, and one which states in a nutshell the two requisites of successful budgeting—first, set your goal; second, achieve your goal.

Control

In order to provide the necessary control, the regular monthly profit and loss statement should be enlarged to include not only the actual figures for the month, but also a column showing the budgeted figures and a third column showing the variation as either an increase or decrease from the budgeted figures. For this purpose, the forecasts already prepared (which are for the year as a whole) will have to be broken down into monthly figures. This is accomplished in most instances merely by dividing the total into twelve parts—one for each month. If the business is seasonal, the total budget may be divided into twelve parts which bear the same relation to the total as each month's sales bears to the total forecasted sales.

By checking up on the variations between the actual and forecasted figures the desired control is obtained. The cardinal principle and byword should be "No variations without the authority of the chief budget officer who has approved the forecast."

In conclusion, it should be remembered that the budget is not a cure-all for the ills to which a business is subject. The budget of itself will not remedy faulty conditions. The budget merely serves the business man the same as the compass serves the mariner—it points the way; without it, it is true, either may have an idea where he is heading but both lack the means of checking their progress concurrently with their voyage, and there's the difference—the difference between aimlessly drifting until you reach your goal and the setting out for your goal in a direct line with no deviations except for good and sufficient reasons.

Trade Customs for Gummed Tape

The following trade customs have been adopted by the National Association of Gummed Tape Manufacturers, 18 East 41st Street:

1. The following shall be considered standard sizes and count for gummed materials in reams or rolls:

2. COUNT

(a)—*Gummed Papers*—

The standard ream of paper shall be 500 sheets.

(b)—*Gummed Binding Tapes*—

The standard rolls of paper tape shall be as follows:

35 lb. basis—800′ and 500′

60 lb. basis—600′

The standard roll of gummed cloth tape shall not be less than 150 yards.

3. SIZE

(a)—*Gummed Papers*—

The standard size reams of gummed paper shall be 17x22 inches and 20x25 inches.

(b)—*Gummed Binding Tapes*—

Standard widths shall be in cuts of even inches or fractions evenly divisible by ¼ inch but in no case shall the *standard* width be less than ¾ inch.

4. BASIS

The basis weight of gummed paper tape shall be the ream weight of the raw paper on a 24x36—480 basis. All paper used in the manufacture of gummed tape shall be of a No. 1 kraft, having a Mullen Test of not less than one point to the pound.

5. NOMINAL VARIATIONS AND MARKINGS

When purchasing by the roll, weight per roll cannot be guaranteed. When purchasing by the pound, yardage per pound is not guaranteed. No package shall be marked or stencilled or labelled with other than the actual dimensions, weights, count or contents. If package is not marked showing the basis weight of the raw paper—the invoice billing the merchandise, must contain the basis weight of the raw paper.

6. PACKINGS

Standard case of Gummed Paper shall contain about 20 reams. Standard case of Binding Tape shall average about 500 lbs. Wrappers, cartons, plugs, etc., shall be charged for at the price of contents. Such tape shall not exceed 2½% of total weight. Bundles shall be put up in as near 30" lengths as possible.

7. EXTRA CHARGES

Extra charges should be made:

(a)—For all gummed materials ordered in other than standard sizes.

(b)—For quantities of less than case lots.

(c)—For quantities of one color and width of gummed cloth tape less than the equivalent 10,000 yards, one inch basis.

(d)—For packing wooden cases.

8. COMMERCIAL DELIVERY

On all deliveries the usual normal variations in quantity and quality shall be accepted.

9. DEFERRED SHIPMENTS

All contract orders for future shipments must specify *ultimate* date of shipment, on which date goods are to be billed and the invoice taken to account by customer whether goods are ordered shipped or not. Where goods are invoiced or held for customer's account, terms are from date of invoice.

10. CANCELLATION OR CHANGE

After an order is received and acknowledged no changes can be permitted, or cancellation allowed without manufacturer's written consent.

11. PRICES AND QUOTATIONS

Subject to change without notice. All orders, contracts and agreements are contingent upon strikes, fires, accidents or other causes beyond control.

12. CLAIMS

For the mutual protection of both buyer and seller, claims must be made within ten (10) days after receipt of goods. No paper or cloth on which claim has been made should be used or returned until seller has had opportunity to inspect same or until adjustment has been made.

13. TERMS

20 per cent—10 days, net 30, F. O. B. shipping point.

Statement by Secretary Porter

O. M. Porter, secretary of the association states that these trade customs were drawn up in the interest of the manufacturer, the distributor and the consumer of gummed paper tape as it is believed that knowledge of the conditions under which gummed tape will be manufactured and sold is of interest to all concerned. Mr. Porter says: "The tremendously increased use of fiber shipping containers naturally increases the use of gummed tape as an effective, inexpensive sealing medium. Our members are always ready to go into any shipper's problem with the view to working out the most practical method of sealing his containers so as to insure complete and safe delivery of the product."

Glatfelter Co. Inaugurates Scholarship System

SPRING GROVE, Pa., October 25, 1926.—At a meeting last night of the Hornet Club of the P. H. Glatfelter Company, it was announced by P. H. Glatfelter that the company had decided to offer a scholarship to one of the junior High school students in the Spring Grove High School.

The student will be selected from among applicants in the junior year, by a committee representing the school and the company. He must have had an average of 85 per cent in his freshman and sophomore years, and will be chosen on a basis of scholarship, deportment, application and leadership.

He will be given, during his junior and senior years a free course in paper technoligy in the Institute of Industrial Arts. On graduating from high school and completing the Institute Course, he will be given a scholarship at Gettysburg College which will defray all tuition charges for four years. Further, he will be given work at current rates of pay in the paper mill during vacations.

He must agree to accept such work and employment by the P. H. Glatfelter Company for two years after graduation from college. If he should decide not to go into the paper industry on graduation, he agrees to reimburse the company for the correspondence and college courses.

After making this announcement Mr. Glatfelder asked the club to ratify an arrangement for a moving picture service for the winter. He then called on T. L. Crossley of the Joint Committee on Vocational Education to speak on the development of the text books by the industry and to show some slides picturing features of fiber microscopy and some news machines and mills in Canada.

A group of men at this mill will take correspondence courses with the Institute of Industrial Arts, and the company will assist in the financing of these courses, after the students have completed and paid for the initial course in arithmetic. A class will be formed and a tutor provided.

HG&CO

H. G. CRAIG & CO., Inc.

Paper Merchants

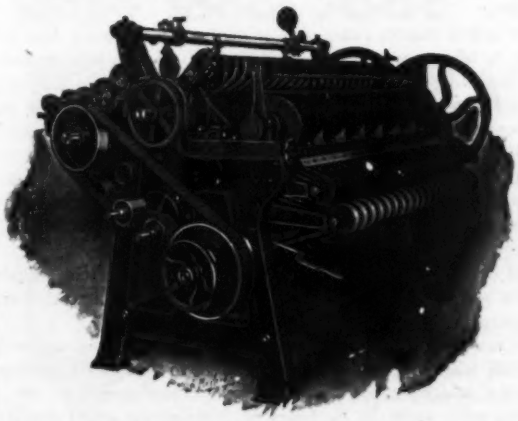
(Since 1868)

News
Hanging
Tissues
Box Board
Wood Pulp
Specialties
Mill Supplies

17 East 45th St. NEW YORK, N. Y.

Paper Cutters

Single, Duplex and Diagonal



CUTTER KNIVES PATENT TOP SLITTER

HAMBLET MACHINE CO.

LAWRENCE MASS.

DAYTON

High Speed Beaters

NOT long ago the Clifton Paper Mills of Passaic, N. J., ordered a Dayton High Speed Beater. Immediately after the installation of this first beater they placed an order for additional high speed equipment.

Likewise, The Robert Gair Company, Thames River Division, New London, Conn., ordered a Dayton. A few weeks after it started operation they also placed an order for additional high speed equipment.

The Dayton High Speed Beater rests its case on performance—and proves its performance by the "repeats" chalked up to its credit. Write us for data on various installations.

We Rest Our Case on Performance

DB&H

The Dayton Beater & Hoist Co.

Dayton, Ohio

Eastern Representatives, Muirhead & Mansfield
501 5th Ave., New York, N. Y.

An Attractive Service Department Office

Two sides of the service department room at Carter, Rice & Carpenter Paper Company, Denver, Col., were formerly glass window partitions. Way to the ceiling they went. Directly, or indirectly, they did not assist in promoting the sale of paper.

Today, those windows of glass have been made opaque with composition board material. Gone is the glass, and, instead, upon the composition panels, painted an attractive gray, are displayed hundreds of printed specimens, collected from many different parts of the country. The heavy oak frames of the original windows make attractive frames for the panel display boards.

Beneath the panels on one side of the room is a long shelf, whereon are extras of samples, and more sample material for which upon the panels is no room.

The service department room of this Denver house is tendered to all users of paper free—printers, advertising counsellors, advertisers. Besides the mounted printed specimens, printed, there

VIEW IN SERVICE DEPARTMENT

are literally thousands of samples in a great file on a third side of the room.

The room contains the desk of M. J. Briggs, service manager, and a convenient table with chairs for those who come seeking assistance.

In putting the new service before printing and advertising interests of its territory, a free service in dummies, and free consultation, were tendered by the company.

"Our service department," it offered, "is prepared to supply dummies promptly of any specifications wanted! also specimens of envelopes, announcements, or any other paper specialties. This service is entirely free, and you are invited to make free use of it. There is nothing quite so effective as a dummy in presenting an idea for a brochure or a catalog. We shall be pleased to design these dummies for you to conform to price, subject matter, postage limitations or to fit any requirements specified.

And of consultation service, this was said—"A private room, amply stocked with printed specimens from all parts of the country, portraying the work done by skilled typographists on all grades of paper, is open to you at all times. It is in charge of our service manager, M. J. Briggs, who will be pleased to discuss your problems with you, and offer all assistance within his power. We are very pround of this service, and urge you to make full and free use of it."

The Carter, Rice & Carpenter Paper Company, which has introduced the service room and dummies and consultation privileges makes it a major objective to put new, satisfying meaning into the word, "service." Its slogan is, "The house of immediate service." Four new high speed trucks were recently added to its delivery equipment to make prompt delivery even more satisfying. Fast elevators, manned by pilots, deliver orders to trucks.

The company constantly in its promotional work makes capital of its stocks. It offers approximately five thousand items.

"You are entitled," the company tells printers, "to receive your good not only promptly, but in first class condition—and you will not be disappointed.

"We are determined to maintain our reputation for absolute reliability—as to the quality of our products, and satisfactory service—this service must extend to every department of our organization. Should any complaint arise, you are assured of immediate and courteous adjustment."

In his contacts with the printing trade, Mr. Briggs is continually picking up fresh samples for the specimen exhibits. Three days a week he is away from the office, in the field, covering Northern Colorado and Colorado Springs. The balance of the week he spends at his desk in the service department.

No direct selling pressure is put behind the operations of the service department. The benefited party may, or may not, buy his paper of Carter, Rice & Carpenter, or specify a brand distributed by them. No check is kept on this phase of the work. It is thought, however, that the service department does produce business, indirectly, and that it is a good-will function bound to have some favorable results.

To Settle Canal Water Rights at Excello

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, October 25, 1926.—United States Judge Hickenlooper has entered orders authorizing Sidney L. Willson, as receiver in the receivership proceedings of Michael P. Murphy and the Old Colony Trust Company against the American Writing Paper Company, to carry out agreements for a settlement of the controversy with Goudie & Johnson over water power rights along the Miami and Erie canal at Excello, in the southern part of the valley.

The receiver was authorized to make formal transfer of these rights by the State of Ohio to the Harding-Jones Paper Company, present owner of the Excello mills of the American Writing Paper Company.

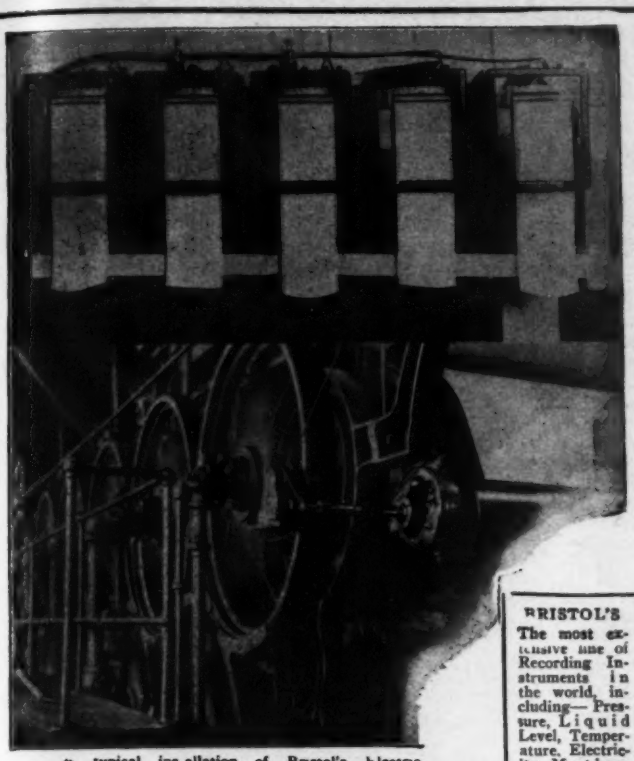
It is stated that in connection with these settlements, Mr. Willson is to take over a fund of $20,000 and interest held in escrow with the Citizens' National Bank and Trust Company, Cincinnati, and is to pay to the Harding-Jones Paper Company $1,200 upon the execution of the water power lease and upon its release of any claim to the $20,000 fund.

Mr. Willson as receiver also is authorized to pay to Goudie & Johnson, $3,800 upon the execution of the water-power lease to the paper company, and Goudie & Johnson's release of all claims to rights under the lease.

It is believed by those who have followed the recent litigation relative to water rights at Excello and Franklin that this legal procedure will bring the matter to an end.

The matter has been of special interest and importance as the Franklin mill was sold some time ago to the Maxwell Paper Company which is installing a modern equipment in the old Harding mill, while T. A. Jones of Middletown and Franklin is making substantial improvements at Excello. Mr. Jones acted as the manager who sold the Franklin mill to Maxwell Howard and associates. Mr. Howard acquired water rights at that time which have no immediate connection with the Excello rights, it is reported.

Mr. Howard's own engineers are now engaged in improving the valuable water rights adjacent to Franklin, including the waterway extending to the State Dam, near the Miami Valley Chautauqua grounds, 12 miles south of this city.



A typical installation of Bristol's Electric Tachometers with magneto installed directly on the paper machine. The recorders are some distance away.

BRISTOL'S
The most exclusive line of Recording Instruments in the world, including— Pressure, Liquid Level, Temperature, Electricity, Motion, Speed, Humidity, Etc.

Where Good Results Depend on Controlled Speed

Quality or Quantity of paper, or both, often are governed by proper control of speed of the paper machine.

Bristol's Electric Tachometer—consisting essentially of a Magneto and an instrument which is a Voltmeter—records and indicates the speed of the paper machine in feet per minute.

The Magneto of the Bristol's Tachometer is so designed that wear cannot affect the voltage. Brushes and commutator segments are constructed of a special non-corrosive alloy, exceptionally long-lived, and there is no change in terminal voltage due to variations in contact resistance. Greater accuracy is maintained and little lubrication or attention is required, making this instrument very suitable for installation in the paper mill.

Write for Catalog No. 1700

THE BRISTOL COMPANY
WATERBURY, CONN.

The Bristol Company Waterbury, Connecticut
FOR 58 YEARS MAKERS OF
BRISTOL'S RECORDING INSTRUMENTS

PERFORATED METALS

STEEL, BRASS, COPPER, MONEL

or any other Metal or Sheet Material

PERFORATED AS REQUIRED

For Pulp and Paper Mills

For Centrifugal and Rotary Screens—Drainer Bottoms
Filter Plates—Pulp Washers—Dryers, &c.

Excellence of product at lowest consistent prices

THE HARRINGTON & KING PERFORATING CO.

5652 FILLMORE ST., CHICAGO, ILL., U. S. A.

NEW YORK OFFICE, 114 LIBERTY STREET

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING OCTOBER 30, 1926

SUMMARY

Cigarette paper	27 cs
Wall paper	66 bls., 2 cs.
Paint paper	1 cs.
Paper hangings	43 bls., 12 cs.
News print	625 rolls
Print paper	516 cs., 161 rolls
Blue print paper	2 rolls, 1 cs.
Wrapping paper	177 rol's, 23 bls.
Packing paper	110 bls., 15 cs.
Decalcomania paper	34 cs.
Envelopes and paper	12 cs., 6 bls.
Writing paper	11 cs.
Stencil paper	50 cs.
Filter paper	6 cs.
Drawing paper	71 cs.
Cover paper	5 cs.
Trunk paper	2 cs.
Pergamyn paper	78 cs.
Tissue paper	25 cs.
Surface coated paper	103 cs.
Basic paper	27 cs.
Gold coated paper	5 cs.
Colored paper	22 cs.
Strawboard	1457 rolls
Miscellaneous paper	40 cs., 363 bls., 105 rolls

CIGARETTE PAPER

Standard Products Corp., De Grasse, Havre, 27 cs.

WALL PAPER

F. J. Emmerich, Adriatic, Liverpool, 21 bls.
F. J. Emmerich, Thuringia, Hamburg, 4 bls.
Globe Shipping Co., Thuringia, Hamburg, 2 bls.
A. C. Dodman, Jr., Inc., Samaria, Liverpool, 2 bls.
A. C. Dodman, Jr., Inc., Samland, Antwerp, 27 bls., 2 cs.
F. J. Emmerich, Reliance, Hamburg, 5 bls.
Wedeman Godknecht & Lally, Reliance, Hamburg, 5 bls.

PAPERHANGINGS

A. C. Dodman, Jr., Inc., Adriatic, Liverpool, 27 bls.
W. H. S. Lloyd & Co., Carmania, Liverpool, 16 bls., 6 cs.
Whiting & Patterson Co., Majestic, Southampton, 6 cs.

PAINT PAPER

Hudson F'd'g & Shipping Co., De Grasse, Havre, 1 cs.

NEWS PRINT

Parsons & Whittemore, Inc., Lutzow, Bremen, 154 rolls.
Janeway & Carpender, Minnequa, Kotka, 249 rolls.
H. Reeve Angel & Co., Inc., Pres. Roosevelt, Bremen, 222 rolls.

PRINTING PAPER

Perkins Goodwin & Co., Arabic, Hamburg, 113 cs.
Periodical Paper Sales, Inc., Arabic, Hamburg, 1 cs.
Maurice O'Meara Co., Lutzow, Bremen, 254 cs.
P. C. Zuhlke, Veendam, Rotterdam, 5 cs.
E. Dietzgen & Co., Veendam, Rotterdam, 9 cs.
C. Steiner, Veendam, Rotterdam, 36 cs.
Maurice O'Meara Co., Minnequa, Kotka, 79 rolls.
P. C. Zuhlke, Samland, Antwerp, 89 cs.
Keuffel & Esser, Reliance, Hamburg, 82 rolls, 9 cs.

BLUE PRINT PAPER

N. Y. Blue Print Paper Co., Veendam, Rotterdam, 2 rolls, 1 cs.

WRAPPING PAPER

Hudson Trading Co., Veendam, Rotterdam, 177 rolls, 23 bls.

PACKING PAPER

J. P. Hefernan Paper Co., Ambridge, Rotterdam, 100 bls.
Birn & Wachenheim, Reliance, Hamburg, 10 bls.
Commonwealth Bank, Reliance, Hamburg, 10 cs.
W. C. Sullivan & Co., Reliance, Hamburg, 5 cs.

DECALCOMANIA PAPER

C. W. Sellers, Pr. Roosevelt, Bremen, 7 cs.
B. F. Drakenfeld & Co., Adriatic, Liverpool, 7 cs. (simplex), 20 cs. (duplex).

ENVELOPES AND PAPER

J. Wanamaker, Adriatic, Liverpool, 11 cs.
Syndicate Trading Co., Adriatic, Liverpool, 1 cs., 6 bls.

WRITING PAPER

Distinctive Writing Paper Co., De Grasse, Havre, 4 cs.
Guibout freres, Majestic, Southampton, 7 cs.

STENCIL PAPER

Arlac Dry Stencil Co., Arabic, Hamburg, 32 cs.
Arlac Dry Stencil Co., Reliance, Hamburg, 18 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., American Merchant, London, 6 cs.

DRAWING PAPER

P. Puttman, Samland, Antwerp, 14 cs.
Keuffel & Esser, Reliance, Hamburg, 57 cs.

COVER PAPER

International F'd'g Co., Thuringia, Hamburg, 5 cs.

TRUNK PAPER

P. H. Petry & Co., Thuringia, Hamburg, 2 cs.

PERGAMYN PAPER

F. C. Strype, Thuringia, Hamburg, 39 cs.
F. C. Strype, Reliance, Hamburg, 39 cs.

TISSUE PAPER

Old Master Paper & Pulp Co., Thuringia, Hamburg, 14 cs.
F. C. Strype, Samaria, Liverpool, 11 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Samland, Antwerp, 70 cs.
Gevaert Co. of America, Samland, Atnwerp, 33 cs.

BASIC PAPER

Globe Shipping Co., Samland, Antwerp, 27 cs.

GOLD COATED PAPER

C. B. Richard & Co., Pr. Roosevelt, Bremen, 5 cs.

COLORED PAPER

P. H. Petry & Co., Reliance, Hamburg, 22 cs.

STRAWBOARD

Perkins Goodwin & Co., Veendam, Rotterdam, 180 rolls.
I. P. Hefernan Paper Co., Veendam, Rotterdam, 295 rolls.
Schiffenhaus Bros., Veendam, Rotterdam, 200 rolls.
Haas Bros., Veendam, Rotterdam, 116 rolls.
1st National Bank of Brooklyn, Veendam, Rotterdam, 90 rolls.
A. Vuyk, Veendam, Rotterdam, 576 rolls.

MISCELLANEOUS PAPER

Bernard D'Uge, Conte Rosso, Genoa, 9 bls.
International F'd'g Co., Veendam, Rotterdam, 10 cs.
Japan Paper Co., Veendam, Rotterdam, 6 cs.
Flaman Sales Agency, De Grasse, Havre, 8 cs.
Kadri Bros., De Grasse, Havre, 10 cs.
T. F. Wilmot & Co., Majestic, Southampton, 6 cs.
The Borregaard Co., Inc., Stockholm, Gothenburg, 286 bls.
M. M. Cohen, Stockholm, Gothenburg, 105 rolls, 68 bls.

RAGS, BAGGINGS, ETC.

Mayer Bros., Lutzow, Bremen, 40 bls. rags.
A. W. Fenton, Inc., Lutzow, Bremen, 14 bls. rags.
Chemical National Bank, Lutzow, Bremen, 56 bls. rags.
W. Schall & Co., Lutzow, Bremen, 86 bls. rags.
Mutnick Bros., Adriatic, Liverpool, 14 bls. rags.
Central National Bank, Adriatic, Liverpool, 24 bls. rags.
S. Silberman & Co., Glasgow Maru, Hamburg, 39 bls. rags.
E. I. Keller Co., Inc., Glasgow Maru, Hamburg, 114 bls. rags.
Chatham Burlap Bag Co., Veendam, Rotterdam, 100 bls. bagging.
Irving Bank Col. Trust Co., Veendam, Rotterdam, 200 bls. bagging.
Irving Bank Col. Trust Co., Arbridge, Rotterdam, 39 bls. rags.
E. I. Keller Co., Inc., Ambridge, Rotterdam, 110 bls. rags.
Lipman Woolstock Co., Carmania, Liverpool, 38 bls. new cuttings.
Brown Bros. & Co., American Merchant, London, 22 bls. rags.
Chase National Bank, Kolsnaren, Leningrad, 909 bls. rags.
Brown & Roese, Bannack, Manchester, 44 bls. bagging.
Chemical National Bank, Bannack, Manchester, 19 bls. rags.
A. W. Fenton, Inc., Thuringia, Hamburg, 40 bls. rags.
J. T. Lodge, Samaria, Liverpool, 10 bls. rags.
Lee Higginson & Co., Samaria, Liverpool, 42 bls. rags.
A. W. Fenton, Inc., Hellen, Marseilles, 64 bls. rags.
Italian Bank, Ida, Trieste, 90 bls. rags.
Irving Bank Col. Trust Co., Dryden, B. Aires, 41 bls. rags.
Anglo South American Trust Co., Dryden, B. Aires, 54 b's. rags.
Central National Savings Trust Co., Hellen, Barcelona, 168 bls. rags.
Equitable Trust Co., Hellen, Barcelona, 215 bls. rags.
Chase National Bank, De Grasse, Havre, 90 bls. rags.
Myers Lipman Woolstock Co., Roussillon, Bordeaux, 15 bls. rags.
Albion Trading Co., Roussillon, Bordeaux, 7 bls. rags.
B. D. Kaplan, Roussillon, Bordeaux, 8 bls. rags.
Royal Manfg. Co., Tomalva, Antwerp, 48 bls. rags.
Darmstadt Scott & Courtney, Tomalva, Antwerp, 110 bls. bagging.
The Stone Bros. Co., Inc., Tomalva, Antwerp, 95 bls. rags.
Chase National Bank, Oregon Maru, Leghorn, 41 bls. rags.
The Stone Bros. Co., Inc., Pr. Roosevelt, Bremen, 17 bls. rags.
E. Mayer, Pr. Roosevelt, Bremen, 125 bls. rags.
Equitable Trust Co., Suevier, Antwerp, 90 bls. rags.
Royal Manfg. Co., Suevier, Antwerp, 33 bls. cottonwaste.
I. Heuerfeld, Suevier, Antwerp, 16 bls. rags.
Irving Bank Col. Trust Co., Suevier, Antwerp, 30 bls. rags.
Bulkley Dunton & Co., Noordam, Suevier, Antwerp, 77 bls. rags.

OLD ROPE

Brown Bros. & Co., N. Y. City, Bristol, 42 coils.
S. Birkenstein & Sons, C. of Pretoria, Hull, 80 coils.
Monte'l & McDonough, Munargo, Nassau, 6 bls.

MANILA ROPE

Disbrow Cordage Co., Veendam, Rotterdam, 268 coils.
Amtorg Trading Co., Kolsnaren, Leningrad, 185 bls.
Grady Travers Co., Veendam, Rotterdam, 80 pkgs.

WOODPULP BOARDS

Lagerloef Trading Co., Minnequa, Lotka, 350 bls., 52 tons.
Lagerloef Trading Co., Minnequa, Raumo, 286 bls., 47 tons.

WOOD PULP WADDING

Birn & Wachenheim, Veendam, Rotterdam, 50 bls.

WOODPULP

Buck Kiser & Co., Inc., Seydlitz, Hamburg, 200 bls. sulphite, 40 tons.
Bulkley Dunton & Co., Lutzow, ——, 135 bls. woodpulp.
Chase National Bank, Glasgow Maru, Hamburg, 512 bls. woodpulp, 76 tons.
M. Gottesman & Co., Glasgow Maru, Hamburg, 1356 bls. woodpulp, 210 tons.
Tidewater Papermills Co., Bornholm, Gaspe, 5624 bls. woodpulp.
Johanson Wales & Sparre, Inc., Stockholm, Gothenburg, 449 bls. dry soda pulp.
E. M. Sergeant & Co., Stockholm, Gothenburg, 299 bls. dry soda pulp, 256 bls. sulphite.
Price & Pierce, Ltd., Stockholm, Gothenburg, 1416 bls. wet pulp.
Atterbury Bros., Inc., United States, Oslo, 2500 bls. woodpulp.
E. M. Sergeant & Co., United States, Oslo, 475 bls. woodpulp.
Bulkley Dunton & Co., Milos, ——, 2800 bls. sulphate, 568 tons; 2875 bls. sulphite, 584 tons; 250 b's. sulphite, 50 tons; 750 bls. sulphate, 150 tons.
I. Anderson & Co., Milos, Hernosand, 4250 bls. sulphate, 850 tons; 3000 bls. sulphite, 500 tons.

CHINA CLAY

Moore & Munger, Victoria Maru, Fowey, 848 tons, 9 cwt.
English China Clays Sales Corp., Victoria Maru, Fowey, 900 tons, 2 cwt.

This brand stands for highest quality

GATOR HIDE KRAFT WRAPPING PAPER

Reg. U. S. Pat. Off.

All southern kraft paper produced by our Bastrop, Louisiana, mill is now being stamped with the Gator Hide brand.

This brand has become a symbol for the highest quality kraft produced in southern mills. It is a guarantee of superior strength, toughness and uniformity. Increasing demand for this brand has made it necessary for us to double the output of our Bastrop mill within the last year.

Jobbers and converters already know that southern kraft is rapidly superseding other kinds of paper where hard service is required. New uses are constantly being found for it. The market is widening rapidly; and the fact that the source of supply, from the fast-growing forests of the South, is inexhaustible, is a positive safeguard to expanding business.

International Paper Co.

Bastrop Division Mill:
BASTROP, LOUISIANA

Executive and Main Sales Office:
100 East 42nd Street,
New York City

Sales Offices in
BOSTON CHICAGO ATLANTA
PITTSBURGH PHILADELPHIA

Paper buyers find leading manufacturers in the Fifth Avenue Building

On your buying trip to New York, begin at The Fifth Avenue Building. It is the buying center for book, coated, and other papers. Here you will find the New York offices and salesrooms of the leading paper merchants, mill supply manufacturers and mill engineers. Here, in one building—on one buying trip—you can complete your needs for the season. The exceptional convenience of location, pleasing atmosphere and association with successful business men make this the obvious place to do your New York buying.

Its situation at historic Madison Square places The Fifth Avenue Building within easy reach of all uptown and downtown New York. Surrounded by the leading hotels. Ten minutes by subway from the Pennsylvania Terminal. Thirteen minutes from Grand Central. Busses and surface lines pass the door. Two elevated lines are within two blocks.

The FIFTH AVENUE BUILDING

Broadway and Fifth Avenue,
at Madison Square, New York

"More than an office building"

Imports of Paper and Paper Stock

(*Continued from page 54*)

National City Bank, N. Y. City, Bristol, 515 bags.
C. B. Richard & Co., N. Y. City, Bristol, 60 cases.

CASEIN

T. M. Duche & Sons, Statrtia, B. Aires, 417 bags, 25,020 kilos.
Kalbfleisch Corp., American Legion, B. Aires, 500 bags.
D. C. Andrews & Co., Thuringia, Hamburg, 121 bags.
Brown Bros. & Co., Dryden, B. Aires, 834 bags.
A. Hurst & Co., Roussillon, Bordeaux, 40 bags.
Atterbury Bros., Inc., Roussillon, Bordeaux, 333 bags.

BALTIMORE IMPORTS

WEEK ENDING OCTOBER 30, 1926

Brown Bros. & Co., Bannack, Manchester, 87 bls. rags.
I. Cohen Son & Co., Bannack, Manchester, 86 bls. rags.
J. Anderson & Co., Milos, Hernosand, 600 bls. sulphite, 100 tons.
Pagel Horton & Co., Inc., Milos, Hernosand, 2400 bls. sulphite, 400 tons.
Bulkley Dunton & Co., Milos, ——, 125 bls. sulphite, 25 tons; 3000 bls. sulphate, 609 tons.
Bulkley Dunton & Co., Folkvard, ——, 825 bls. woodpulp.
Bulkley Dunton & Co., Hannover, ——, 1575 bls. woodpulp.
Bulkley Dunton & Co., Todalsfjord, ——, 2500 bls. woodpulp.
Bulkley Dunton & Co., Wanja, ——, 2750 bls. woodpulp.
Bulkley Dunton & Co., West Eldara, ——, 525 bls. woodpulp.

PORTLAND, ME., IMPORTS

WEEK ENDING OCTOBER 30, 1926

Waterfalls Papermills Co., Ida, Trieste, 6165 bls. woodpulp.

BOSTON IMPORTS

WEEK ENDING OCTOBER 30, 1926

Lagerloef Trading Co., Minnequa, Kotka, 308 bls. woodpulp boards, 44 tons.
Johanson Wales & Sparre, Inc., Minnequa, Hernosand, 300 bls. sulphite, 50 tons; 2400 bls. sulphate, 400 tons.
Pagel Horton & Co., Inc., Minnequa, Domsjo, 3702 bls. sulphite, 617 tons.
D. M. Hicks, Ida, Trieste, 304 bls. woodpulp.
Bulkley Dunton & Co., West Harcuvar, ——, 385 bls. woodpulp, 158 bls. rags.
1st National Bank of Boston, Dryden, B. Aires, 840 bags casein.

NEW ORLEANS IMPORTS

WEEK ENDING OCTOBER 30, 1926

Bulkley Dunton & Co., America, 80 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING OCTOBER 30, 1926

The Stone Bros. Co., Inc., Luxpalile, Naples, 71 bls. rags.
L. H. Abenheimer, Luxpalile, Naples, 303 bls. rags.
E. J. Keller Co., Inc., Luxpalile, Naples, 141 bls. rags.
Tradesmans National Bank, Luxpalile, Naples, 150 bls. rags.
D. I. Murphy, Luxpalile, Oran, 82 bls. rags.
Brown Bros. & Co., N. Y. City, Bristol, 123 bls. rags.
D. I. Murphy, Glasgow Maru, Hamburg, 26 bls. rags.
Chemical National Bank, Glasgow Maru, Hamburg, 242 bls. rags.
Perkins Goodwin & Co., Glasgow Maru, Hamburg, 30 rolls printing paper.
Castle & Overton, Inc., Glasgow Maru, Hamburg, 37 bls. rags.
A. Murphy & Co., Glasgow Maru, Hamburg, 27 cs. paper.
Atterbury Bros., Inc., Glasgow Maru, Hamburg, 878 bls. woodpulp, 131 tons.
E. J. Keller Co., Inc., Glasgow Maru, Hamburg, 56 bls. rags.
D. I. Murphy, Glasgow Maru, Hamburg, 408 bls. rags.
Phila. Girard Natl. Bank, Glasgow Maru, Hamburg, 369 bls. rags.
D. I. Murphy, Ambridge, Rotterdam, 125 bls. rags.
S. E. Ingber, Ambridge, Rotterdam, 83 bls. rags.
Brown Bros. & Co., Ambridge, Rotterdam, 36 bls. rags.
Buck Kiaer & Co., Inc., Minnequa, Obbola, 3500 bls. kraft pulp, 500 tons.
Neidich Process Co., Minnequa Helsingfors, 316 cs. tissue paper.
Lagerloef Trading Co., Minnequa, Kotka, 343 bls. woodpulp boards.
Johanson Wales & Sparre, Inc., Minnequa, Hernosand, 1200 bls. sulphate, 200 tons; 600 bls. sulphite, 100 tons.
Phila. Girard Natl. Bank, London Exchange, London, 237 bls. rags.
D. I. Murphy, London Exchange, London, 232 bls. rags.
Bulkley Dunton & Co., Caracoli, ——, 100 bls. rags.

Great Southern Lumber Co. Has Picnic

[FROM OUR REGULAR CORRESPONDENT]

BOGALUSA, La., November 1, 1926.—The monster picnic of the Great Southern Lumber Company and allied interests held here Saturday, October 16, was a decided success in every respect. The number present was estimated at almost 20,000.

The event was considered so extraordinary that curiosity prompted the attendance of many people. They appeared credulous, a bit doubtful as to its success. All, however, departed with the conviction that Bogalusa never fails an undertaking, whether it is erecting million dollar industries, or taking a day off for play.

The spirit in which all, from the highest paid executive to the humblest worker entered into the festivities seemed spontaneous, and could not help but attract the attention of any one used to crowds.

Colonel A. C. Goodyear, president of the Great Southern Lumber Company, and allied companies, who attended the great picnic, made the following statement:

"Twenty-five years ago two men established the basic plan of what has since grown into the New Orleans Great Northern Railroad Company, the Great Southern Lumber Company, the Bogalusa Paper Company, the Bogalusa Turpentine Company, and the Bogalusa Stores Company. These two men were Frank H. Goodyear and Charles W. Goodyear. That this plan has developed far beyond their dreams is true, but it is equally true that we have not yet reached in some directions the goal which these two men had in mind. If they could be here today, however, I feel sure that they would look upon what has been accomplished with satisfaction and pride. They would see that from the smallest beginnings, we have developed what has been justly called 'The best little railroad in the United States,' and a lumbering and paper operation that is known throughout the world for quality production, efficiency of operation and complete utilization of our basic material—Long Leaf Yellow Pine.

"To you, the officers and employees of our several companies, is due the success which we have so far reached, and upon you will depend our realization of the further improvements we have in view. As we look with pride upon our past accomplishments and with confidence toward the future, it might be well for us to remember that not only these industries, but this city, with all of its advantages and comforts which you enjoy, found their inception in the minds of the two men who had the vision and courage to establish our foundation."

News of the Boston Trade

BOSTON, Mass., November 1, 1926.—Albert Wilson, one of the directors of Edwin Butterworth Company, Ltd., of Manchester and Liverpool, England, and Ghent, Belgium, is paying his first visit to the offices of the subsidiary corporation, E. Butterworth & Co., Inc., of Boston and New York. Mr. Wilson expects to sail for England about November 20.

F. F. Spaulding, president of Spaulding & Tewksbury Company, sailed from New York October 16 on the *Zacarpa*, of the United Fruit Line for Havana, Honduras and other places, expecting to return via New Orleans and reach Boston about the middle of November. The steamer was due at Havana October 20. The captain was advised of the hurricane, so that the steamer slowed down, arriving safely at Havana ten hours after the storm had passed over.

Frank M. Preston, assistant manager of the Robert Gair Company, Haverhill, Mass., who also had charge of buying all the waste paper, has resigned his position.

Special Hoods for Oregon Paper Co.

SALEM, Ore., October 27, 1926.—The Oregon Pulp and Paper Company, plans to equip its paper machines with special insulated hoods, of H. S. Taylor design. These hoods are guaranteed non-drip and fireproof throughout. The order was placed through H. S. Taylor, consulting engineer, Dayton, Ohio.

Sulphur

A FIRST REQUISITE

IN

Paper Making

Large Production
Ample Reserves
Prompt Deliveries
Purity 99½%

TEXAS GULF SULPHUR CO.
41 E. 42nd Street New York City
Mine Gulf, Matagorda County, Texas

PERKINS HOLYOKE

Built for the Present and the Future

PERKINS CALENDERS

FOR OVER half a century the paper trades have recognized the superior merit of Perkins Calender Rolls. This is just one index to the high quality and serviceableness of PERKINS CALENDERS.

As already announced, the introduction to the trade of this new line of Supercalenders, Sheet Calenders and other Finishing Machines—a long step in advance of anything hitherto offered—is under the direction of Mr. Archibald C. Lade.

THE SERVICES OF THIS WELL-KNOWN ENGINEER ARE AT YOUR COMMAND. He will gladly call at your request to discuss any new equipment you may need or to lend any possible assistance on any matters pertaining to the finishing of your products.

Write Dept. P11, B. F. PERKINS & SON, INC.
HOLYOKE, MASS., U. S. A.

Trade Mark

Our platform is good dyestuffs, well serviced. For this reason many firms elect us year after year to supply their requirements. Colors distinguished for quality, a company known for its reliability—that is the Heller and Merz reputation.

Prompt deliveries made from stocks in New York, Boston, Philadelphia and Chicago.

THE HELLER & MERZ CO.
505 Hudson St. New York City

Boston 287 Atlantic Ave. Chicago 146 W. Kinzie St. Philadelphia 114 Market St.

Springfield, Mass. 24 Lester Street

Factory—NEWARK, N. J.

For reliable running and average long life

LINDSAY FOURDRINIER WIRES

are unsurpassed

We make them for the largest and fastest machines.

Cylinder Wires All Sizes

The Lindsay Wire Weaving Co.

Collinwood Sta. CLEVELAND, OHIO

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, November 3, 1926.

Paper manufacturers continued to receive an encouraging number of inquiries about contract business during the last week, while the volume of sales transacted continued in good proportion. Prices are being maintained in view of the strong tone of the market, and reports of concessions and shadings are few. The trade is generally optimistic over the outlook and the best sales efforts are being exerted to make 1926 a record year.

The normal demand for news print continues heavy for the time of year, and accumulations are being consumed rapidly.

Manufacturers of box board are speeding production to meet a heavy demand for this product, and the market has a strong tone. Quotations on fine grades of paper are being maintained on an even level. Buyers of tissues are placing orders in fair volume, while coarse paper and wrapping paper are being sold at a brisk rate.

Mechanical Pulp

With supplies of mechanical pulp abundant enough to take care of the present good demand, conditions in the ground wood market last week remained practically unchanged. Production is going on at a good rate. Prices are holding up to normal levels, and considerable inquiries are being received for future business.

Chemical Pulp

Several important sales have been reported on both Scandinavian Kraft and sulphite at about the same prices quoted the preceding week, while the tonnage for spot deliveries on chemical pulp in general has diminished greatly. For that reason whatever tonnage is left for shipment from dock is expected to make prices firmer.

Old Rope and Bagging

No increase in the demand for old rope from the paper mills was reported during the last week. The market continued to remain in an easy position. As a result however of somewhat lower quotations the demand for this commodity is expected to pick up soon. Prices on all grades of bagging are holding up to recent levels.

Rags

The market for new and old rags remains about the same, according to reports from dealers. The better grades remain firm while the lower grades show a slightly downward tendency. White stock is more in demand than colored. Roofing rags continue firm and find a ready market.

Waste Paper

There was a brisk demand for the better grades of waste paper, especially shavings, during the last week. Orders coming into the market have been greater than the supply could handle. Business for the lower grades shows a slight decline as the result of small demand from the board mills.

Twine

A general expansion of trade in the twine market is expected in the near future. Business remained about the same during the last week. Manufacturers expect the first improvement to come with the approach of the holiday season.

Frank O. Butler Returns From Europe

Frank O. Butler, of Chicago, president of the J. W. Butler Paper Company of Chicago, and the Butler Paper Corporations, accompanied by Mrs. F. O. Butler, returned from a three months' European trip on Tuesday, October 26, on the *Majestic*. They were met at the pier by his brother, J. Fred Butler, vice-president of the Butler interests, and Mrs. J. Fred Butler. Executives of the three Butler companies of New York were also at the pier to greet their chief.

During Mr. Frank O. Butler's tour in Europe, he made his headquarters at the Butler offices in London, also touring France, Germany and Austria.

"From present indications it appears to me that our future European competition will come from Germany," Mr. Butler said on his arrival. "Everybody in Germany is working just as though there never had been a World War. They have adapted their mentality so as to forget the set-backs they received during the World War and immediately after, and now they are working day and night to re-establish themselves in world commerce. They are, undoubtedly, gaining much of the ground they lost during the war, and appear to be in better condition than any of the other European countries."

F. O. and J. F. Butler, during their stay in New York, expressed pleasure at the decision of the Butler executives in this City, to move all Butler business into the new Master Printers' Building at 34th street and 10th avenue, when this building is ready for occupancy in July, 1927. Both the Butlers left for their Chicago homes Sunday night.

The entire second floor of the new Master Printers' Building, now under construction at 34th street and 10th avenue, New York City, has been leased for a period of ten years by the Butler Paper Company, Inc., now located at 261 Eleventh avenue. Additional storage space contracted for in the new building will run the Butler lease up to an aggregate of $500,000 for the ten-year period.

F. W. Leonard, general manager of the Butler Paper Company, Inc., and John R. Robinson, personal representative of the Butler family, negotiated the lease for the new quarters, and Paul Butler, president of the company, signed it.

The new building will be completed, according to present plans, on July 1, 1927, and Butler's present lease on the building at 261 Eleventh avenue, expires during the same month, and the company expects to be located in its new quarters on August 1, 1927.

The Butler Paper Company, Inc., of New York, is the outgrowth of the former American Paper Mills Corporation, which company for three years distributed the Butler Brands of Paper in New York. The American Paper Mills Corporation was taken over by the Butler interests, through Mr. Robinson, last January, and the new organization, controlled entirely by the Butler family, was completed in March of this year.

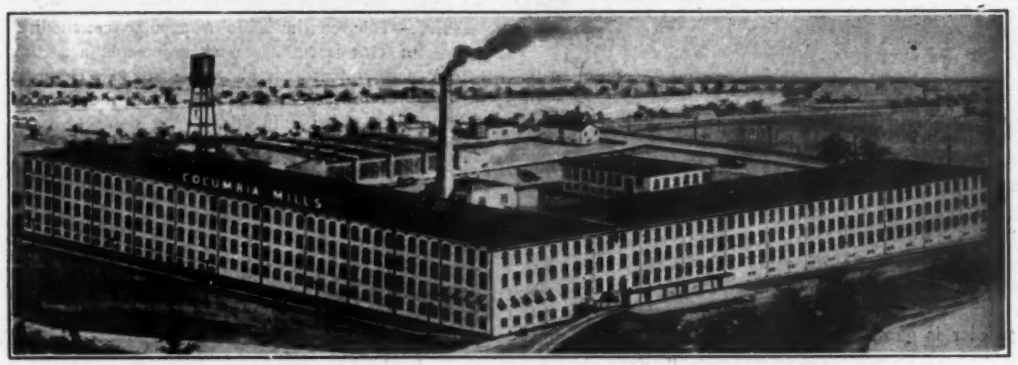
In the new Master Printers' Building there will be housed, in addition to the Butler Paper Company, Inc., the New York office of the Butler Paper Corporations, which is the central organization of the Butler interests, also the Butler American Paper Company, the export division of the Butler Paper Corporations. The Butler Paper Company, Inc., will be the only paper distributors in the new eighteen-story building which is to be devoted entirely to the housing of printing concerns.

COTTON DRYER FELTS

"Mt. Vernon" Standard Weave
Medium—Standard—Extra Heavy
Widths 36" to 164"

"Richland" Triplex Weave
Widths 68" to 210"

Felts within above ranges made in lengths as required



Columbia, S. C., Plant of Mt. Vernon—Woodberry Mills, Inc., Baltimore—where "Richland" Felts are made

Orders must be placed sufficiently in advance to insure satisfactory delivery

TURNER, HALSEY COMPANY
62 Leonard Street, New York
Sole Selling Agent for
MT. VERNON—WOODBERRY MILLS, Inc.

EMPIRE QUALITY ROSIN SIZE

The Economies derived from the use of our Emulsifying System are well worth your consideration. Our experienced **Technical and Practical Service Staff** is ready to demonstrate this without obligation to you. Why not ask us now?

A Perfect Product of Practical Experience

EMPIRE SIZE & CHEMICAL CORP.
ALBANY, N. Y.

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, November 3, 1926.

The contract movement in all of the leading chemicals during the last week is well up to recent totals, conditions in the market disclosing few changes of any importance. The majority of chemicals are well maintained. Contract business and spot transactions in the various branches of the market are holding up in satisafctory volume. No attempt has been made by any of the large manufacturers to advance contract prices, the general market favoring the buyer.

BLANC FIXE.—A steady undertone prevails in the blanc fixie market, the consuming manufacturers buying in fair volume. Sellers are quoting prices of pulp and powder as of the preceding week—pulp at $60 a ton in bulk, and powder at from 4¼ a pound to 4½ cents a pound in barrel at works.

BLEACHING POWDER.— The announcement that last year's contract prices would prevail on basic items for 1927 had the effect of inducing a greater degree of confidence in the market for bleaching powder as well as for other chemicals. Consumers began placing contracts last week more freely than they did a year ago. The powder is quoted at from $2 to $2.40 per 100 pounds in large drums at works, according to size of container.

CASEIN.—Manufacturers report a slight easing off of prices in the casein market in respect to contract transactions. As was the case, however, during the preceding week, few alterations in spot business have been reported. Domestic casein is quoted at from 14½ cents to 17 cents a pound. Imported grades bring from 15 cents to 16 cents a pound, all in bags.

CAUSTIC SODA.—Manufacturers in increasing numbers began writing contracts last week for caustic soda, the prices having been established as of the year before. It is expected that there will be a greater tonnage of contract business than record sales of the recent year reveal. Great activity was also reported in the spot market. Caustic soda is offered at from $3.10 to $3.15 a 100 pounds in large drums at works. Spot car loads bring from $3.20 to $3.25 a 100 pounds.

CHINA CLAY.—Spot lot sales of china clay are slightly stronger than last week, according to manufacturers of this commodity. Prices are slightly higher for the best grades and for bleaching materials and materials for pottery. Imported clay is still quoted at from $13 to $22 a ton in bulk, ship side. Domestic washed clay brings $8 to $9 a ton at mine, and $10 a ton pulverized.

CHLORINE.—Acting on the announcement of contract prices for the ensuing year consumers began to place orders for deliveries of chlorine in large volume, last week. Liquid chlorine in tanks at works sells at 4 cents a pound on contract orders and 4¼ to 4½ cents a pound for spot transaction.

ROSIN.—With good weather in the South for the production of rosin the stock of this commodity has been building up, although manufacturers report a slight slackening of demand. Rosin used in paper mills is now quoted at from $13.50 to $13.60 per 280 pounds in barrels from the docks.

SALT CAKE.—A steady tone prevailed last week in the salt cake market, and although prices were not advanced the offerings continued to be limited. Salt cake sells still at from $18 to $20 a ton in bulk at works.

SODA ASH.—A larger business than that of the last fiscal year may be expected this fall in the soda ash market if sales continue as of the present week. The market is brisk, consumers indicating by their orders, that they are satisfied with contract prices. Quotations on contracts in car lots at works per 100 pounds are $1.25 in bulk, $1.38 in bags and $1.63 in barrels.

STARCH.—The steady course of the starch market has been disturbed by no violent influences. Business continued along active lines. Special paper makers' starch is still selling at $3.42 a 100 pounds in bags, and $3.59 a 100 pounds in barrels.

SULPHATE OF ALUMINA.—Sulphate of alumina continued last week to sell in large bulk, both on contract business and spot trade. Commercial grades are being offered at from $1.40 to $1.45 in bags at works in car lots. Iron free brings from $2. to $2.05 a 100 pounds at works.

SULPHUR.—The sulphur market last week was marked by a steady undertone, there being no changes in price reports or in the volume of business transacted. Sulphur is quoted at $18 to $19 a ton in bulk at mine and $21 to $23 a ton, ship side.

TALC.—Talc continues as a popular commodity among consumers of chemicals. Contract shipments are coming along at a brisk pace, prices remaining unchanged. Domestic talc brings $16 to $18 a ton at eastern mines while the French product sells for $18 to $22 a ton, ship side.

POWELL RIVERS' NEW UNITS

(*Continued from page 24*)

the interest of Canadian industries generally. The following is an extract from the brief of the Canadian publishers:

"Possibly no other industry in Canada is similarly situated. All raw materials—paper, ink, engraving, art work, etc—are subject to sales tax and heavy duties ranging from ten to twenty-five per cent. (with the exception of newspaper presses, which enter Canada duty free). We are taxed, super-taxed, and sales-taxed to the extent of many thousands of dollars annually on this raw material and plant equipment, while the United States publisher brings his finished product into Canada free of all duties, and import taxes.

"On the ground of common justice to the Canadian publishing industry, as well as on national grounds, the Canadian publishers ask that these artificial handicaps be removed or equalized so that we may compete with foreign publishers in our own market on an equal basis.

"Various remedies have been suggested by members of Parliament and many public and business men and women. One of these is that the duty and sales tax be removed on all raw materials, plant equipment, and supplies. There we might rest our case, but in the public interests, as Canadians, our representations would be incomplete if we did not bring to your attention other phases of the situation, and the views and representations made by others who are seriously affected by present conditions. These are: Canadian workers, Canadian paper makers, other producers of raw materials, Canadian booksellers and stationers, Canadian ink makers, and various Canadian bodies representing national sentiment and opinion.

"An alternative suggestion made by representatives of the above bodies and by others is that, instead of removing the duty on raw materials, a duty be placed on the advertising and printed matter, of fifteen cents a pound, until such matter is bound in a periodical, when it comes in duty free."

Parkersburg Box Co. to Expand

[FROM OUR REGULAR CORRESPONDENT]

PARKERSBURG, W. Va., November 1, 1926.—Directors of the Parkersburg Corrugated Box Company have voted to double the capacity of the company's Depot street plant and a contract for the erection of a new building similar to the one now used by the company will be let within the next few days.

The Parkersburg Corrugated Box Company is the city's newest industry. Organized and managed by Parkersburg business men this company began operation in a new factory within the past few weeks.

From the beginning the new plant was unable to handle all the orders it has been receiving and the directors at last night's meeting decided to increase production.

George McDonald is president of the company and G. C. Foutty is plant superintendent.